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PAR
PASQUALINA CARRESE

PROCESSUS DE CROISSANCE POST-TRAUMATIQUE CHEZ LES ANCIENS COMBATTANTS CANADIENS DES FORCES DE LA PAIX SOUFFRANT D'UN ÉTAT DE STRESS POST-TRAUMATIQUE DEVENUS PAIRS AIDANTS: UNE ÉTUDE NARRATIVE

THE PROCESS OF POSTTRAUMATIC GROWTH IN CANADIAN VETERAN PEACEKEEPERS DIAGNOSED WITH POST-TRAUMATIC STRESS DISORDER WHO HAVE BECOME PEER HELPERS: A NARRATIVE STUDY

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Sommaire

Le concept de croissance post-traumatique (CPT) fait référence à une transformation positive qui émerge par suite d'une lutte cognitive contre des conditions de vie très éprouvantes (Calhoun & Tedeschi, 1998). Cette lutte cognitive se produit en raison de la remise en question des postulats fondamentaux d'une personne ayant vécu un événement traumatique; elle est caractérisée par des ruminations initiales envahissantes suivies de ruminations réflexives qui peuvent mener à une CPT (Calhoun, Cann, & Tedeschi, 2010; Joseph & Linley, 2008). Certaines études démontrent l'importance du développement de l'identité narrative dans la transformation positive (Pals, 2006c). L'identité narrative fait référence au récit développé par l'individu de qui il est, comment il est devenu cette personne et comment il perçoit son avenir (Pals, 2006a). La présente étude s'appuie sur trois analyses de cas d'anciens combattants canadiens des forces de la paix qui ont reçu un diagnostic d'état de stress post-traumatique, rapportent une CPT et sont devenus pairs aidants. L'objectif principal était d'illustrer les deux étapes du processus narratif qui favorise la CPT : le traitement narratif exploratoire et la résolution positive (Pals, 2006c). Pour réaliser ceci, une version abrégée de l'entrevue sur le récit de vie (McAdams, 2008) fut administrée. La codification des liens de causalité (interprétation du narrateur d'une expérience antérieure comme ayant un effet causal significatif qui l'autodéfinit), de leurs caractéristiques et des schémas de construction de soi qui émergent des multiples liens de causalité au sein du récit du sujet, a suivi. Les résultats de l'étude supportent l'adoption de la définition circonscrite de la CPT proposée par Pals et McAdams (2004) comme processus narratif identitaire. En comparaison à d'autres

types de croissance subséquente à l'adversité, ce processus narratif en deux étapes mène au développement du moi, de la sagesse et à un changement positif de la personnalité (Pals, 2006b). Les résultats de l'étude soulignent plus particulièrement le rôle de la perturbation biographique dans les traumatismes militaires et comment les différences entre les participants en termes d'ouverture à leur expérience, tant au plan de l'engagement cognitif qu'au plan affectif, mènent à des résultats de croissance divers. Les résultats de cette étude qualitative auprès d'anciens combattants canadiens des forces la paix illustrent, d'une part, le rôle de la culture et plus particulièrement de la culture militaire dans le maintien de l'état de stress post-traumatique militaire et, d'autre part, le rôle des intervenants et des organismes gouvernementaux dans la facilitation versus l'entrave du développement de la CPT authentique. Les résultats de la recherche fournissent ainsi aux cliniciens une orientation initiale sur la manière de faciliter la CPT dans cette population. Enfin, les résultats illustrent l'utilité d'appliquer des méthodes narratives dans l'étude de la CPT, étant donné leur capacité à illustrer : 1) comment l'individu rétablit une cohérence dans son historie de vie et donne un sens à son expérience post-adversité; et 2) les facteurs socioculturels pouvant entraver ou faciliter la CPT.

Mots-clefs: croissance post-traumatique, croissance liée au stress, processus narratif, identité narrative, état des stress post-traumatique, centralité de l'évènement, vétérans, anciens combattants, militaires

Abstract

Posttraumatic growth (PTG) refers to a positive transformation that occurs as a result of a cognitive struggle with highly challenging life circumstances (Calhoun & Tedeschi, 1998). This cognitive struggle takes place given that traumatic events challenge one's core assumptions and is characterized by initial intrusive ruminations followed by deliberate ruminations that can lead to PTG (Calhoun, Cann, & Tedeschi, 2010; Joseph & Linley, 2008). Some studies refer to the importance of narrative identity processing in positive transformation (Pals, 2006c). This study consisted of three case studies of Canadian veteran peacekeepers, with post-traumatic stress disorder, engaged in a peer support role at the time of the study, and who self-identified as having experienced PTG. The primary objective of the study was to illustrate the two narrative processes (Pals, 2006c) said to be involved in PTG: 1) exploratory narrative processing (emotional engagement and exploration of the destabilizing impact of the event on the self); and 2) positive resolution (the construction of a positive ending for the story that provides coherence and resolution and involves the re-establishment of one's capacity to feel positive emotions in the present, as developed from the post-event experience of negative emotions). A modified version of McAdams's (2008) Life Story Interview was administered and transcribed as part of this study followed by the coding of causal connections (the narrator's interpretation of a past experience as having an enduring causal impact that contains self-defining significance or meaning in his or her life); of their characteristics and the identification of patterns of self-making that emerge across multiple causal connections within the subject's life story, as per Pals (2006c) narrative

methodology. Study findings support the adoption of Pals and McAdams's (2004) circumscribed definition of PTG as an identity-making narrative process. In comparison to other types of growth following adversity, this two-step narrative processing leads to ego development, wisdom and positive personality change (Pals, 2006b). The study findings emphasize, specifically, the role of biographical disruption in military trauma and how differences between veteran participants in terms of openness to their experience, both in terms of cognitive and affective engagement, result in different growth outcomes. Finally, findings from this qualitative study with Canadian veteran peacekeepers illustrate the role of culture, and military culture specifically, in the maintenance of military post-traumatic stress disorder, and the role of significant others as well as government agencies, in either hindering or facilitating narrative identity processing that leads to the development of authentic PTG. The study findings provide clinicians with initial guidance as to how to facilitate PTG in this population. Finally, the research findings illustrate the usefulness of applying narrative methods to the study of PTG given their ability to: 1) illustrate how the individual re-establishes coherence and meaning post-adversity; and 2) identify socio-cultural factors that can either hinder or facilitate PTG.

Key Words: posttraumatic growth, stress-related growth, narrative processing, narrative identity, post-traumatic stress disorder, centrality of event, veterans, military

Table of Contents

List of Tables

Table

Acknowledgements

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Finally, I am grateful for all the great learning opportunities my employment at Veterans Affairs Canada has offered me to date. Note that the views and opinions expressed in this thesis are those gleaned from the scientific literature or are my own and do not necessarily reflect the policy or the official position of my employer.

Acronyms

ACE: Adverse Childhood Experience

ACT: Acceptance Commitment Therapy

ANS: Autonomic Nervous System

APA: American Psychiatric Association

C-PTGI: Current Standing Posttraumatic Growth Inventory

CAF: Canadian Armed Forces

CBI: Core Beliefs Inventory

CPT: Croissance post-traumatique

CGAS: Cognitive Growth and Stress Model of Posttraumatic Growth

CSF: Comprehensive Soldier Fitness Program

DASS21: Depression Anxiety Stress Scales

DND: Department of National Defence

DSM: Diagnostic Statistical Manual

ESPT: État de stress post-traumatique

FDM: Functional-Descriptive Model

IED: Improvised explosive device

OVTG: Organismic Valuing Theory of Growth through Adversity

PITS: Perpetration-Induced Traumatic Stress

PSW: Peer Support Worker

POW: Prisoner of War

PTG: Posttraumatic growth

PTGI: Posttraumatic Growth Inventory

PTGI C: Posttraumatic Growth Inventory for children

PTGI C-R: Revised Posttraumatic Growth Inventory for children

PTGI-CV: Posttraumatic Growth Inventory Clinician Version

PTGI-42: Paired Format Posttraumatic Growth Inventory

PTGI-SF: Posttraumatic Growth Inventory Short Form

PTGI-X: Posttraumatic Growth Inventory X

P-PTGI: Physical Posttraumatic Growth Inventory

PTSD: Post-traumatic Stress Disorder

SCM: Stress Coping Model

SEC: Spiritual–existential change

SRGS: Stress-Related Growth Scale

SRGS-R: Stress-Related Growth Scale-Revised

UN: United Nations

VAC: Veterans Affairs Canada

WAS: World Assumption Scale

Introduction

Exposure to traumatic events is very common and requires clinical and political attention. World Health Organization Surveys, conducted in 24 countries (n = 68,894), found that 70.4% of those surveyed reported experiencing lifetime traumas, with exposure averaging 3.2 traumas per person (Kessler et al., 2017). The American Psychiatric Association defines traumatic events as events in which the person was either directly exposed to actual or threatened death, serious injury, or sexual violence; witnessed the above, or was repeatedly indirectly exposed to aversive details surrounding such event(s) typically as part of one's professional duties (American Psychiatric Association [APA], 2013). Friedman (2018) notes that the risk of exposure to trauma has been a part of the human condition since humans evolved as a species.

A possible negative outcome of trauma exposure is posttraumatic stress disorder (PTSD), a trauma and stress-related disorder characterized by disturbing re-experiencing of a traumatic event, negative alterations in cognitions and mood, attempts to avoid reminders of the event, and hyper-arousal following exposure (APA, 2013). The term PTSD arose following the experience of soldiers returning from the Vietnam War and was preceded by terms such as *soldier's heart, war neurosis* and *shell shock*, applied during previous wars (Crocq & Crocq, 2000). PTSD is one of the only diagnoses appearing in the Diagnostic Statistical Manual (DSM) today that requires exposure to an

external (traumatic) event, such as a war, natural disasters, motor vehicle accidents, child abuse, sexual assault, or other violent crimes (APA, 2013).

The estimated lifetime prevalence rate of PTSD in the Canadian general population is 8% (Langlois, Samokhvalov, Rehm, Spence, & Connor Gorber, 2011). The reported lifetime prevalence rate of PTSD in Regular Canadian Armed Forces (CAF) members and those reservists who deployed in support of the mission to Afghanistan is 11.1% (Pearson, Zamorski, & Janz, 2014). The prevalence of PTSD in the veteran population is higher than that of active military members. Forbes et al. (2019) contend that this may be due to a variety of possible factors, such as members with PTSD discharging at a higher rate than their non-PTSD counterparts and additional stressors associated with the transition to civilian life. As of December 2018, over 21,000 Canadian veterans were in receipt of a disability benefit from Veterans Affairs Canada (VAC) for a psychiatric diagnosis of PTSD (VAC, 2018). Other potential psychological problems following trauma are depression, anxiety, and substance use disorders, either on their own or as a comorbid diagnosis to PTSD (Ehring, Ehlers, & Glucksman, 2008).

Positive outcomes following exposure to trauma include resilience, recovery and posttraumatic growth (PTG). Resilience refers to the ability of adults, exposed to a potentially highly disruptive event, to maintain relatively stable, healthy levels of psychological and physical functioning and generative positive emotions across time, despite possible non-pathological, short-term disturbances in normal functioning

following the traumatic event (Bonanno, 2004). Recovery, on the other hand, refers to an outcome following exposure to traumatic events in which the individual's normal functioning is temporarily disrupted, typically for a period lasting several months to two years, before gradually returning to pre-event baseline levels. During the period of disruption, threshold or sub-threshold psychopathology is typically present (Bonanno, 2004). PTG, on the other hand, differs from both resilience and recovery in that it refers to a positive change in which individuals reach a level of functioning post-trauma that exceeds their pre-trauma level of functioning (Bonanno, 2004).

In the U.S., the number of disability cases related to PTSD nearly tripled from approximately 345,000 cases in the fiscal year 2008 to more than 940,000 cases as of July 2017 (Shane, 2017). In an attempt to prevent the future development of PTSD in its members, in 2009 the U.S. Army invested $125-million on the development and dissemination of a U.S. Comprehensive Soldier Fitness Program (CSF), which has been offered to date to over one million U.S. soldiers as an obligatory form of mental fitness and resiliency training. One of the online components of the CSF consists of training content in the area of PTG. The CSF however lacks evidence to indicate its effectiveness (Steenkamp, Nash, & Litz, 2013). A second PTG facilitation model, the PTG Path (Nelson, 2011) also has not been extensively researched.

The surge of interest in the study of PTG began in early 2000 (Helgeson, Reynolds, & Tomich, 2006), partly due to the advent of the positive psychology movement whose

proponents advocate for increased research on "the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions." (Gable & Haidt, 2005, p. 103). Since 2000, PTG studies have been conducted with a growing array of populations, who have experienced different types of adversity, such as life-threatening physical illness, war and motor vehicle accidents (Helgeson et al., 2006). Some researchers have recently argued however that PTG research may be in need of a "reset" (Jayawickreme & Blackie, 2016, p. 3). Important criticisms of the scientific methodology adopted in most PTG studies have been put forth. This includes criticism as concerns selecting subjects for PTG studies who have not necessarily experienced a traumatic event (Boals, Steward, & Schuettler, 2010), a strong reliance on cross-sectional study designs and retrospective self-report measures (Jayawickreme & Blackie, 2014), inconsistent findings between PTG and wellbeing (Boals, et al., 2010), great variation in time-since-event in the measurement of PTG (Jayawickreme & Blackie, 2014), and a disagreement as to the actual definition of PTG (Tennen & Affleck, 2002). Is PTG, for instance, reflective of authentic growth that leads to personal transformation and personality change or is it a form of self-enhancement that allows the individual to cope following adversity? Are behavioral manifestations or collaborations by significant others required for PTG to be considered authentic? Also, should PTG be considered a process, an outcome, or both? Finally, research on how to facilitate PTG in a clinical setting is lacking. Ethical concerns have been raised as to potential adverse effects of introducing the idea of growth following trauma too early in the recovery process

(Harbin, 2015). A better understanding of the PTG process is therefore needed before proceeding further into the application of PTG-specific treatment programs.

The aim of this research was to explore PTG as an identity-making narrative process in three Canadian veteran peacekeepers, diagnosed with PTSD, who self-identified as having experienced PTG but who can also be said to exhibit observable, behavioral PTG given their post-trauma commitment to peer support work. As is typical in case study designs, the number of study participants was limited to allow for a detailed analysis of the large amount of semi-unstructured data collected during interviews. This study is the first, to our knowledge, to examine PTG in a Canadian veteran peacekeeper cohort, a population important to study given its high exposure to traumatic events. The use of the term 'veteran' varies in the scientific literature, referring to anyone who has participated in a military deployment or to those who served but have left the military regardless of whether they have or have not deployed (Forbes, et al., 2019). In this study we apply the term veteran peacekeeper to refer to those who have deployed in at minimum one peacekeeping mission and who have since left the military. Finally, this research constitutes one of the few studies on PTG in a veteran peer support worker population. Moran, Russinova, Yim, and Sprague (2014) define peer helpers as "individuals with a lived experience of a psychiatric illness, who provide services to other mental health consumers." (p. 33).

The objective of the study was to illustrate specifically the two-step narrative identity processing of growth following adversity, as per Pals' (2006b) narrative model of positive transformation or PTG. Step one of Pals' model involves exploratory narrative processing in which the individual emotionally engages with and explores in depth the destabilizing impact of the traumatic event on the self. Step two in Pals' model involves constructing a positive ending to one's story of adversity that provides coherence and resolution and which involves the re-establishment of one's capacity to feel positive emotions in the present, as developed in relations to the post-event experience of negative emotions. This is the only study to our knowledge that aims to illustrate the two-step narrative identity processing of growth following adversity developed by Pals (2006b, 2006c) in a veteran population.

Pals' (2006c) narrative methodology was adopted to achieve our research objective. A modified version of McAdams' (2008) Life Story Interview was administered and transcribed. Different coders then independently coded and resolved discrepancies on causal connections identified in the different life story narratives. Pals defines causal connections as interpretations of a past experience that have had an enduring causal impact on the self and that contain self-defining significance or meaning in one's life. Coding of the characteristics of the identified causal connections (type of events, impact on self, valence, degree of openness to the experience, etc.), and of patterns of self-making that emerged across multiple causal connections within each subject's life story followed.

The thesis is divided into five main sections. The first section provides a detailed description of the scientific literature on the construct of PTG. It begins with a definition of the term PTG and the listing of other terms used in the scientific literature to describe growth following adversity. A brief presentation is then provided as to why the study of PTG is important and this despite mixed findings, to date, as to the relationship between PTG and psychological adjustment, which are explained. This is followed by an overview of the origin of the PTG construct and the development of the original Posttraumatic Growth Inventory (PTGI), which resulted in the identification of five domains of PTG. The evolution of research in the area of PTG is then illustrated, via a detailed presentation of new versions of the PTGI (and other measures) developed, over time, in response to critical appraisals and scientific advancement in the area of PTG research. Information on the validity and reliability of these PTG instruments, as well as methodological issues and critiques as concerns the most commonly used PTGI measures is also provided. A listing of PTG studies conducted specifically with the military and veteran population follows a description of civilian populations studied to date. The importance of studying PTG based on type of trauma experienced is then explained, with a strong emphasis on the specific type of traumatic injuries experienced by veteran peacekeepers. A presentation of the different theories of PTG, of the relationship between PTSD and PTG, and the presentation of recent empirical models that attempt to map the pathway towards PTG and/or PTSD post-adversity follows. Current limitations of PTG research, including cross-cultural considerations are then presented. A subsection follows on the importance of narrative-identity processing in

PTG, especially as relates to the military and veteran context. Section one ends with a description of current clinical applications of PTG, followed by study objectives and their theoretical and clinic relevance.

Section two provides a description of the case study research design adopted, the research participants, the study recruitment process, and the Life Story Interview tool administered. This is followed by a detailed description of the procedure utilized to code qualitative narrative content gathered, and the primary and secondary criteria applied to ensure valid research findings and adherence to ethical research practices.

Section three presents the detailed life stories as narrated by each veteran participant. This is followed by an illustration of the two-step narrative processing of the impact of the traumatic mission events on the self undertaken by each participant. For step one (exploratory processing) the following elements were analyzed: 1) traumatic experiences named and type of threat experienced; 2) degree of acknowledgement of the traumatic impact of the event on the self; and 3) degree of analysis and forming of new links and patterns within the self post-adversity. For step two (positive resolution), the elements analyzed were: 1) the degree of resolution and integration achieved in the life story; 2) the coherence of the life story; and 3) the quality of the growth experienced. Section three ends with a comparison of the two-step narrative processing undertaken by each study subject.

The fourth section provides a discussion of findings both as relates to the study's objectives and previous findings reported in the literature. The study's strengths and limitations are then described and several suggestions for future research are proposed. In the fifth and final section, study conclusions and clinical implications are presented.

Theoretical Context

Definition of Posttraumatic Growth

Calhoun and Tedeschi (1998) describe PTG as a positive transformation that occurs as a result of a cognitive struggle with highly challenging life circumstances. Consistent with Bonanno (2004), Tedeschi and Calhoun (2004) add the following:

> Posttraumatic growth describes the experience of individuals whose development, at least in some areas, has surpassed what was present before the struggle with crises occurred. The individual has not only survived, but has experienced changes that are viewed as important, and that go beyond what was the previous status quo. Posttraumatic growth is not simply a return to baseline-it is an experience of improvement that for some persons is deeply profound. (p. 3)

The idea that human beings can be positively changed due to life crises is not novel. It appears in ancient spiritual and religious traditions, in literature, and philosophy. The systematic scientific study of growth following adversity originated however in the early 1990s. Terms such as *stress-related growth* (Park, Cohen, & Murch, 1996), *benefit finding* (Tennen & Affleck, 2002), and *growth through adversity* (Joseph & Linley, 2005) have also been used to describe positive transformation post-trauma in the scientific literature but the term PTG is most common. The construct commonly refers to both growth as a process and as an outcome following adversity (Jayawickreme & Blackie, 2014).

Why the Study of Posttraumatic Growth is Important

The subject of PTG has elicited a great amount of academic and public interest in the last decade, in part as a result of the advent of the positive psychology movement (Seligman & Csikszentmihalyi, 2000), but also due to the construct's potential clinical significance. Research on PTG may increase our knowledge on the various responses to life adversity that can then inform as to how to promote recovery, resilience (Cho & Park, 2013), and growth. In active military personnel specifically, Tedeschi and McNally (2011) contend that the facilitation of PTG holds the promise of enhancing the soldier's psychological fitness. As such, soldiers may potentially be less impacted by trauma (increased resilience), may recover more quickly from trauma experiences (return to baseline) or grow from it (PTG; Tedeschi, 2011).

Relationship between Posttraumatic Growth and Psychological Adjustment

Tedeschi and McNally (2011) admit however: "We are in uncharted territory" (p. 21) when it comes to clinical interventions to facilitate PTG. Research results on the relationship between PTG and psychological adjustment are currently mixed and much still remains to be understood (Cho & Park, 2013; Park & Helgeson, 2006). Helgeson, et al. (2006) conducted a meta-analysis of 87 cross-sectional studies to examine the relationship of benefit finding and growth to psychological and physical health and found that growth was related to less depression and greater positive wellbeing. However, growth was also positively associated with more intrusive and avoidant thoughts about the stressor and was found to be unrelated to anxiety, global distress,

quality of life, and subjective reports of physical health.

The inconsistent findings on the association between PTG and psychological adjustment may be attributed to several factors, including a failure to make clear distinctions between different related concepts. Sears, Stanton, and Danoff-Burg (2003) found, for instance, that PTG, benefit finding as well as positive reappraisal are related but distinct constructs given their unique predictors. More specifically, Sears et al. found that positive reappraisal (intentional, repeated use of benefit-related information as a coping strategy) predicted future PTG but that benefit finding alone, defined by Tennen and Affleck (2002) as the identification of benefit from adversity, did not. As such, the authors argue that the three concepts should be treated as distinct in future research and conclude that: "In metaphorical terms, positive reappraisal coping may be an important path along the yellow brick road to the Emerald City of posttraumatic growth" (p. 495), the latter conceptualized here as an outcome.

Joseph and Linley (2005) add that PTG involves an increase in psychological wellbeing, a concept derived from the eudemonic philosophic tradition emphasizing meaning and self-actualization. In contrast, the authors contend that psychological adjustment is related to subjective wellbeing, a concept deriving from the hedonic philosophic tradition emphasizing positive affect.

Moderator effects may also explain the inconsistent relationships found between

PTG and positive adjustment. Helgeson et al. (2006) observed, for instance, a stronger relationship between growth and depression when the adversity occurred two or more years in the past. Finally, Helgeson et al.'s meta-analytic study only explored the magnitude and significance of tests of a linear relationship between PTG and various physical and psychological health measures (Shakespeare-Finch & Lurie-Beck, 2014). In their meta-analysis of 42 studies on PTG, Shakespeare-Finch and Lurie-Beck (2014) found a significant linear relationship between PTG and PTSD symptoms but a significantly stronger curvilinear relationship between the two variables. The strength and linearity of the relationships differed based on trauma type and age. More recently, Sawyer, Ayer, and Field (2010) conducted a meta-analytic review of findings from 38 studies examining the relationship between PTG following cancer or HIV/AIDS and positive psychological adjustment, negative psychological adjustment, and subjective physical health. A small positive relationship between PTG and positive mental health, a small negative relationship between PTG and negative mental health, and a small positive relationship between PTG and measures of subjective physical health were found. In the realm of physical illness, PTG has also been associated with decreased pain in individuals with cancer and lupus (Katz, Flasher, Cacciapaglia, & Nelson, 2001) and improved immune functioning in women with early stage breast cancer (McGregor et al., 2004).

As to veterans, Martz, Livneh, Southwick, and Pietrazak (2018) found that PTG moderated the relationship between PTSD symptoms and Quality of Life in U.S.

veterans with a life-threatening illness or injury, and predominantly in those veterans who reported high PTSD. A study with 5,302 U.S. service members with war zone or combat experience, conducted by Bush, Skopp, McCann, and Luxton (2011), suggests that PTG may be *protective* following combat in reducing suicidal ideation. Finally, a recent longitudinal study, conducted by Tsai, Mota, Southwick, and Pietrzak (2016) with U.S. veterans, demonstrated that PTG might act as a *buffer* against the effects of subsequent traumatic events. More specifically, Tsai et al. found that, in the face of new trauma exposure, greater perceptions of personal strength in response to prior traumatic events were associated with greater protection against the exacerbation of PTSD symptoms and development of PTSD. The authors conclude therefore that fostering PTG in clinical treatment may help to promote psychological resilience in response to potential subsequent traumas.

Measures of Posttraumatic Growth

Several scales have been developed to measure growth following adverse life events, such as the *Stress-Related Growth Scale* (SRGS; Park et al, 1996) and the *Perceived Benefits Scale* (McMillen & Fisher, 1998). To date, the *Posttraumatic Growth Inventory* (PTGI; Tedeschi & Calhoun, 1996) remains however the most widely used test to measure PTG in the scientific literature.

The description of the various versions of the PTGI developed to date and appearing in the section below: 1) provides a brief overview of the origin of the PTG

construct with the development of the original PTGI; 2) illustrates the evolution of research in the area of PTG, via the development of revised PTGI versions; 3) includes research findings on the validity and reliability of some of the measures of PTG; and 4) details current methodological issues and critiques as concerns the most commonly used PTGI measures.

The Posttraumatic Growth Inventory. Tedeschi and Calhoun (1996) developed the PTGI based on a literature review of perceived benefits following a traumatic event. This led to the identification of three broad categories of positive growth: perceived changes in self, a changed sense of relationship with others, and a changed philosophy of life; and the construction of the 34-item PTGI. This first version of the PTGI evaluated self-reported degree of change following a negative event, retrospectively, using a 6-point Likert scale, in the three conceptual categories mentioned above. Test respondents were undergraduate students, who reported having experienced a significant negative life event in the last six months. Events reported included bereavement, separation/divorce of parents, injury-causing accidents, criminal victimization, unwanted pregnancy but, also, academic problems. Principal components analysis of the 34-items of the scale was conducted which eventually led to a revised 21-item PTGI that covers five domains of PTG growth (Tedeschi & Calhoun, 1996). The five domains of PTG are: greater appreciation of life; closer and more intimate relationships with others; greater sense of personal strength; new possibilities; and spiritual development (Tedeschi & Calhoun, 2004).

Research on PTG today commonly applies the total score of the PTGI as well as factor scores of the PTGI to provide evidence for the presence or absence of PTG (Taku, Cann, Calhoun, & Tedeschi, 2009). The five-factor model of the structure of the PTGI has been confirmed in studies with English-speaking populations (Brunet, McDonough, Hadd, Crocker, & Sabiston, 2010; Linley, Andrews, & Joseph, 2007), in U.S. Veterans with PTSD (Palmer, Graca, & Occhietti, 2012), and in non-English speaking populations (Ho, Chan, & Ho, 2004; Morris, Shakespeare-Finch, Rieck, & Newbery, 2005; Prati & Pietrantoni, 2014). Some studies with non-Anglophones, however, found evidence for a three-factor model of the structure of the PTGI, as per the originally identified three broad domains of PTG (Leiva-Bianchi & Araneda, 2013; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003; Weiss & Berger, 2006). Finally, Lee, Luxton, Reger, and Gahm (2010) found evidence for both a five-factor and a single higher order-factor structure for the PTGI with a population of active U.S. military members, adding therefore to the debate as to whether the PTG is a multidimensional or one-dimensional construct (Taku, Cann, Calhoun, & Tedeschi, 2008).

To obtain a better understanding of the nature of PTG, Taku et al. (2008) used a large American sample (926 adults from 14 studies), to compare a three-factor model (representative of the originally identified three broad dimensions of PTG), a five-factor model (the five subscales mentioned above) and a one-factor model of the PTGI structure (given existing correlations between the five factors of the PTGI). The authors confirmed the five-factor structure of the psychometric test and cited research evidence

for the discriminant validity and concurrent validity (Tedeschi & Calhoun, 1996), the content validity (Shakespeare-Finch, Martinek, Tedeschi, & Calhoun, 2013) and the construct validity (Shakespeare-Finch & Barrington, 2012) of the PTGI.

To date, the PTGI has been translated and adapted into several different languages, such as Chinese (Ho et al., 2013), Spanish (Weiss & Berger, 2006), Dutch (Jaarsma, Pool, Sanderman, & Ranchor, 2006), Japanese (Taku, Kilmer, Cann, Tedeschi, & Calhoun, 2012), and French (Cadell, Suarez, & Hemsworth, 2015).

The Posttraumatic Growth Inventory-X. Recently, Tedeschi, Cann, Taku, Senol-Durak, and Calhoun (2017) developed an expanded Posttraumatic Growth Inventory-X (PTGI-X) which adds four spiritual–existential change (SEC) items to the original two spirituality subscale items of the PTGI. The aim is to capture PTG in individuals from a wider array of cultures who may hold spiritual and existential beliefs post-trauma that may differ from the more traditional religious beliefs held by many Westerners. In Tedeschi et al.'s study, the new 6-item SEC factor demonstrated high internal reliability. As well, the five-factor structure of the expanded scale was supported by confirmatory factor analysis. According to Tedeschi et al., the 25-item PTGI-X is therefore a validated instrument that can be used with participant samples whose adherence to more traditional religious beliefs is low.

The Posttraumatic Growth Inventory-Short Form. A short form of the PTGI has also been developed (Cann et al., 2010). The Posttraumatic Growth Inventory-Short Form (PTGI-SF) consists of 10 items that assesses the same five domains as the PTGI. Each of the factors from the original PTGI is represented in the PTGI-SF by two items. Cann et al. have illustrated that the five-factor structure of the PTGI-SF is equivalent to that of the PTGI. Internal consistency of the inventory was also found (Cann et al., 2010). Others have confirmed the five-factor structure of the PTGI-SF with respective Chilean, Portuguese and Italian populations (García & Wlodarczyk, 2015; Lamela, Figueiredo, Bastos, & Martins, 2014; Prati & Pietrantoni, 2014). Finally, Kaler, Erbes, Tedeschi, Arbisi, and Polusny (2011) found satisfactory reliability, replicable factor structure and concurrent validity of the PTGI-SF among a sample of U.S. National Guard soldiers following a 16-month deployment to Iraq.

"Current Standing" Posttraumatic Growth Inventory Short Form. To remove the retrospective nature of PTG reporting and to facilitate objective assessments of PTG in prospective (Time 1 and Time 2 assessment) studies, Kaur et al. (2017) recently developed a modified PTGI-SF. The "Current Standing" PGTI-SF (C-PTGI-SF; Kaur et al., 2017) is based on an adaptation of PTGI items, made by Frazier et al. (2009), in their longitudinal study. The scale measures "actual" PTG over the last two weeks. In contrast, the PTGI and PTGI-SF provide retrospective self-reports of growth since a traumatic event. Finally, the C-PTGI-SF includes an additional item not present in the original PTGI ("I have compassion for others") and adopts a 7-point Likert-type scale in contrast

to the PTGI-SF's 6-point Likert-type scale. Exploratory factor analysis and confirmatory factor analysis were performed to assess the psychometric validity of the modified measure. Results supported a single-factor model with two additional correlations between items assessing spirituality and items assessing compassion/appreciation for others.

Other Posttraumatic Growth Inventory Adaptations. Other PTGI-related measures include the clinician version of the PTGI (PTGI-CV; Calhoun & Tedeschi, 1999), the PTGI for children (PTGI-C; Cryder, Kilmer, Calhoun, & Tedeschi, 2006; PTGI-C-R; Kilmer et al., 2009), the P-PTGI which measures physical PTG (Walsh, et al., 2018), the Paired Format Posttraumatic Growth Inventory (PTGI-42; Baker, Kelly, Calhoun, Cann, & Tedeschi, 2008), and the revised Stress Related Growth Scale (SRGS-R; Boals & Schuler, 2018a).

Methodological Issues Related to the PTGI. One of the main controversies in the area of PTG research is whether current common measurements of PTG are valid given the retrospective nature of self-reported growth (Frazier et al., 2009). PTGI administration basically involves asking the participant to recall, "how they were before they experienced the adverse event, to estimate how much they have changed since the event, and to assess the extent to which this change can be attributed solely to the adverse life event." (Blackie et al., 2017, p. 22). The subject's task is therefore demanding. Jayawickreme and Blackie (2014) describe the subject's experience in

responding to each of the PTGI items as follows: 1) deduce current standing on the dimension; 2) recall standing on the dimension prior to the adversity; 3) compare these standings; 4) calculate degree of change; and 5) evaluate how much of the reported change is attributable to the adverse event. This, the authors contend, is problematic given that perceived change is typically only modestly related to actual pre-post change. As such, the PTGI may measure a trait-like tendency to perceive positive change rather than actual, quantifiable growth (Jayawickreme & Blackie, 2014).

Boals et al. (2010) have also argued that most studies of PTG have included events that participants do not perceive to be highly central in their lives. The authors replicated the Helgeson et al. (2006) meta-analysis but only included events central to individuals. In doing this, the PTGI yielded negative correlations with depression, anxiety, global distress, and physical health symptoms, and positive correlations with positive affect and quality of life as expected thereby measuring, according to Boals et al. (2010), authentic rather than perceived growth.

Boals and Schuler (2018a) recently created the SRGS-R as a measure to report authentic rather than illusory PTG. The SRGS-R contains more neutral wording of items in comparison to the original PTGI and uses a bipolar scale, which allows the respondent to report both negative and positive changes. The SRGS-R is considered to have good construct validity (Boals & Schuler, 2018a). Individuals who completed the SRGS-R as part of the Boals & Schuler study reported significantly lower levels of PTG in

comparison to those who were administered the PTGI. Finally, whereas PTGI scores were unrelated to measures of mental health, and positively associated with PTSD symptoms and avoidance coping, SRGS-R scores were significantly correlated with better mental health, lower PTSD symptoms, and unrelated to avoidance coping. This pattern of results suggests the SRGS-R is less prone to reports of illusory growth.

Boals and Schuler (2018b) then assessed the extent to which female university participants reported PTG when completing the PTGI versus the SRGS-R based on an event that may be distressing but which cannot lead to genuine PTG: a cracked cell phone screen. A total of 613 study participants who experienced a cracked cell phone screen were randomly assigned to complete either the SRGS-R or the PTGI and measures of distress and coping. Study findings revealed that participants who completed the PTGI reported significantly higher levels of PTG in comparison to those who completed the SRGS-R. PTGI scores were also significantly correlated with PTSD symptoms, distress, anxiety, depression, avoidance coping, and denial coping. SRGS-R scores however were not significantly correlated to any of the measures mentioned above. Study authors therefore reassert that the SRGS-R is less prone to reports of illusory growth in comparison to the PTGI. Note that the more recent inventories mentioned above are however not yet used extensively to date in studies of PTG.

Perception of Growth following Adversity

The perception of growth following adversity appears to be common. Sears et al. (2003) studied a sample of 92 women with early-stage breast cancer, 83% of which reported at least one benefit following their diagnosis, most commonly in the area of relating to others. Laufer and Solomon (2006) studied a sample of 2,949 Israeli adolescents, from grades seven to nine, exposed to one or more terror incidents, 74.4% of which reported PTG. Finally Tsai, El-Gabalawy, Sledge, Southwick, and Pietrzak (2015) analyzed the data of 2719 U.S. veterans participating in the National Health and Resilience in Veterans Study who reported, at minimum, one potentially traumatic event and found that 50% of all U.S. veterans studied reported at least "moderate" PTG in at least one life domain in relation to their "worst" trauma. Furthermore, almost three-quarters of those who screened positive for PTSD reported "moderate" or higher levels of PTG. This last finding is consistent with Tedeschi and Calhoun (2004) who contend that PTG and PTSD can co-exist.

Studies of Posttraumatic Growth in Civilian Populations

PTG has been reported in college students (McCaslin et al., 2009), refugees (Sims & Pooley, 2017), the bereaved (Michael & Cooper, 2013), Holocaust survivors (Lev-Wiesel & Amir, 2006), earthquake survivors (Chen, Zhou, Zeng, & Wu, 2015), individuals with cancer (Stanton, Bower, Low, Calhoun, & Tedeschi, 2006), acquired brain injuries (Grace, Kinsella, Muldoon, & Fortune, 2015), HIV (Sherr et al., 2011), and in victims of motor vehicle accidents (Zoellner, Rabe, Karl, & Maerker, 2008) and

interpersonal violence (Elderton, Berry, & Chan, 2017). As well, PTG has been studied among children and adolescents (Meyerson, Grant, Carter, & Kilmer, 2011) and spouses of trauma survivors (Dekel, 2007). Finally, vicarious PTG has been observed in psychotherapists (Arnold, Calhoun, Tedeschi, & Cann, 2005).

Studies of Posttraumatic Growth in Military Members and Veterans

An important number of studies on PTG have been conducted primarily with physically ill populations. The number of studies of PTG in the veteran and military population is increasing, although these studies remain limited (Larner & Blow, 2011). Whereas over a hundred quantitative research studies exist on PTG in individuals who have received a diagnosis of cancer (Shand, Cowlishaw, Brooker, Burney, & Ricciardelli, 2015), we have identified a total of 44 quantitative research studies on the subject of PTG in the Veteran and military population. Twenty-one of these studies explored PTG in U.S Veterans who served in either WW II or Korea (Aldwin, Levenson, & Spiro, 1994; Elder & Clipp, 1989), Vietnam (Feder et al., 2008), Iraq and/or Afghanistan (Benetato, 2011; Currier, Lisman, Harris, Tait, & Erbes, 2013; DeViva et al., 2016; Marotta-Walters, Choi, & Shaine, 2015; Park et al., 2017; Pietrzak et al., 2010), Kuwait (Maguen, Vogt, King, King, & Litz, 2006) or in a variety of conflicts and from different eras (Evans et al., 2018; Hijazi, Keith, & O'Brien, 2015; Martz, et al., 2018; Morgan & Desmarais, 2017; Morgan, Desmarais, Mitchell & Simons-Rudolph, 2017; Palmer, et al., 2012; Russano, Straus, Sullivan, Gobin, & Allard, 2017; Tsai & Pietrzak, 2017; Tsai, et al., 2015; Tsai, Mota et al., 2016; Tsai, Sippel, Mota, Southwick,

Pietrzak, 2016). An additional seven studies explored PTG in U.S. active duty personnel (Bush, et al., 2011; Gallaway, Millikan, & Bell, 2011; Kaler et al., 2011; Lee et al., 2010; Levy, Conoscenti, Tillery, Dickstein, & Litz, 2011; McLean et al., 2013; Mitchell, Gallaway, Millikan, & Bell, 2013). Finally, two studies explored PTG in both U.S. still serving members and Veterans (Borowa, Robitschek, Harmon, & Shigemoto, 2016; Kaur et al., 2017).

Only 14 quantitative studies on PTG in non-U.S. Veteran populations were identified. Nine of these were with Israeli Veterans (Mamon, Solomon, & Dekel, 2016), former POWs (Dekel, Ein-Dor, & Solomon, 2012; Dekel, Mandl, & Solomon, 2011; Lahav, Bellin, & Solomon, 2016; Lahav, Kanat-Maymon, & Solomon, 2017; Solomon & Dekel, 2007; Waysman, Schwarzwald, & Solomon, 2001; Zerach, Solomon, Cohen, & Ein-Dor, 2013) or both (Dekel, Mamon, Solomon, Lanman, & Dishy, 2016). The remaining five studies explored PTG in former German child soldiers of World War II (Forstmeier, Kuwert, Spitzer, Freyberger, & Maercker, 2009), in Netherland soldiers who served in Iraq (Engelhard, Lommen, & Sijbrandij, 2015), in a cohort of Danish soldiers (Staugaard, Johannessen, Thomsen, Bertelsen, & Berntsen, 2015), in a sample of U.K. Veterans (Murphy, Palmer, Lock, & Buguttil, 2016), and in a cohort of Turkish Veterans (Tuncay & Musabak, 2015).

In terms of qualitative studies of PTG in military and Veteran populations, Habib, Stevelink, Greenberg, and Williamson (2018) conducted a systematic search of

qualitative research on PTG and identified nine articles, between 2011 and 2016, which met the inclusion criteria for their review and qualitative analysis. The retained, published and unpublished studies examined PTG, using qualitative methods and analysis, in military (Army, Navy, Air Force or Special Forces) or ex-military populations (those who left the Armed Forces), who received military training or experienced deployment, and were exposed to trauma while on duty. The 195 participants in total were primarily from the UK, U.S. or Finland.

To our knowledge, no studies on PTG in still-serving CAF members or Canadian Veterans have been published. In addition, we located no quantitative or qualitative study specifically on the subject PTG in peacekeeping populations, although several research studies have been published reporting perceived benefits associated with peacekeeping.

Benefit Finding Associated to Peacekeeping. Dirkzwager, Bramsen, and van der Ploeg (2003) surveyed a sample of 3,481 Dutch peacekeeping soldiers, on average 6 years following their peacekeeping deployment, and found that the majority of these reported positive consequences associated to their deployment despite the stressful nature of the operation: 82% reported a broadening of their horizon and 52% reported increased self-confidence post deployment. These findings are consistent with results obtained by Bache and Hommelgaard (1994) with Danish UN peacekeeping soldiers and by Mehlum (1995) with Norwegian soldiers who served in the United Nations Interim

Force in Lebanon (as cited in Dirkzwager et al., 2003). Britt, Adler, and Bartone (2001) assessed personality hardiness and meaningfulness of work in U.S. peacekeepers six months into their Bosnia peacekeeping operation; and perceived benefits associated with the peacekeeping mission four to five months post deployment. Personality hardiness, defined as "a dispositional tendency to find meaning in events, particularly stressful events that challenge the individual" (Britt et al., p. 54), was positively associated with finding meaning in work during deployment. In turn, finding meaning in work was prospectively related to finding positive benefits with the peacekeeping experience, as reflected by a positive belief post-mission as concerns one's increased personal experience and ability to deal with stress. Thomas, Dandeker, Greenberg, Kelly, and Wessely (2006) surveyed serving U.K. peacekeepers who also reported on the positive impact of peacekeeping on their lives, mostly in terms of an appreciation of "things back home." (p. 376). Finally, Schok, Klebe, and Boeije (2010) explored meaning ascribed by 19 Dutch Veterans (on average six years out of military service) to their peacekeeping mission in Cambodia using in-depth interviews. Purposive sampling distinguished between former peacekeepers with and without posttraumatic stress responses. Thematic analysis revealed that the stories of Veterans without a stress response were characterized by self-confidence, mastery, meaning-made, purpose, and fulfillment post-mission. In contrast, the stories of Veterans with a posttraumatic stress response were characterized by existential questions (attempts to make meaning rather than meaning-made) and feelings of life threat, agitation, devalued human life, an unjust world and of being caught between two worlds.

Trauma Type and Posttraumatic Growth

Kira et al. (2013) write that the relationship between PTG and trauma type has not been the subject of systematic research and has yet to be addressed in PTG theory:

> Given the fact that there are different types of trauma and some trauma types may be more or less conducive to growth than the others, it is interesting to explore if this assumption of growth after trauma applies to all trauma types at all levels of intensity. PTG theory does not address which traumas might contribute more or less to expected growth, or if some trauma types (e.g., incest, sexual abuse, and attachment disruptions, as well as discrimination and slavery) can be too detrimental to allow for personal post-traumatic growth. (p. 122)

Kiliç, Magruder, and Koryürek (2016) examined differences in the growth-producing potential of three different types of war-related traumas (trauma to self, trauma to loved ones, and personal adversity, such as having to migrate due to ethnicity and religious discrimination) in a sample of 203 Iraqi university students residing in Turkey who experienced severe war-related traumatic events. Adversity-type traumas were positively correlated with PTG whereas trauma to self was negatively correlated to PTG. Kira et al. studied PTG in a Palestinian sample of 132 adults and found that: 1) type I traumas (one time, time-limited trauma) was associated with PTG; 2) type II traumas (repeated occurrence but with an end to trauma exposure, such as in sexual abuse) was not associated to PTG; and 3) type III collective trauma (continuous trauma, such as in racism) was negatively associated with PTG. Shakespeare-Finch and Armstrong (2010) compared PTG in sexual assault survivors, motor vehicle accident victims and the bereaved and found that, whereas all three groups scored similarly within the personal strength and spiritual domains of PTGI, those in the bereavement group reported significantly higher levels of growth in relating to others than those who experienced

sexual assault. This finding is understandable given the loss of trust that ensues following interpersonal violence in contrast to bereavement where individuals may reach out to others and strengthen their relationships with them (Shakespeare-Finch & Armstrong, 2010). The authors suggest that therapists working with sexual assault victims therefore initially focus on topics other than relationships in therapy. However, as therapy progresses, they may consider initiating a discussion on how to foster growth in the more personally challenging relationships with others life domain.

Hefferon, Grealy, and Mutrie (2009) synthesized qualitative data from 57 published articles on PTG and illness related trauma and identified a potential sixth PTG domain: new awareness and heightened importance of the body. Walsh et al. (2018) replicated this finding in a mixed qualitative/quantitative study with a sample of 18 males with prostate cancer. Thematic analysis of interview transcripts revealed new awareness of the body as a distinct dimension of PTG following prostate cancer.

In terms of military trauma, in their review and synthesis of nine qualitative studies of military and ex-military personnel, Habib et al. (2018) found that "the presentation of PTG in this population is not dissimilar to that of civilians." (p. 617). This is consistent with a confirmatory factor analysis of the PTGI conducted by Palmer et al. (2012) with a veteran sample with PTSD, which indicated that the different domains of the PTGI are applicable to the veteran population. Palmer, Murphy, and Spencer-Harper's (2016) qualitative study of the lived experience of PTG in UK

veterans who have received treatment for PTSD revealed however subtle differences in the domains of PTG experienced by veteran study participants in comparison to the five dimensions included in the PTGI. Veterans interviewed reported PTG as well in the form of a better understanding of their reaction to trauma and acceptance of nuance rather than "black and white" thinking as concerns their reactions to events and emotions post-adversity (Palmer et al., 2016). Finally, Habib et al. identified PTG in the form of a strong desire to re-integrate into civilian life society in their review and synthesis of qualitative studies of military and ex-military personnel. These are important findings in that they can inform psycho-education, psychotherapeutic and transition interventions with military and veteran populations.

Combat Trauma. As concerns the particularities surrounding combat trauma exposure, Larner (2013), a former U.S. Marine and a PTG researcher, states that studies on growth in combat soldiers are important given that:

> The psychological trauma of military combat is very different from other traumas such as being the victim of a natural disaster, a severe car accident, or a terminal illness. Being the victim of interpersonal violence such as rape or violent assault may be more closely related to combat trauma because of the interpersonal nature of the events, but in these cases the trauma survivor is still considered solely a victim rather than also a perpetrator of violence and trauma against others at the same time. Furthermore, the piling up of trauma and other stressors that come with the intensity of combat is not typical of most other traumas, with research often focusing on a single traumatic event […] combat veterans represent a self-selected population of individuals who willingly face traumatic experiences with foreknowledge and in the name of national security rather than as victims of random events […] we make the case for inclusion of these important and unique factors in the future study of combat-related posttraumatic growth. (p. 187-188)

On the subject of perpetrators, MacNair (2002) studied National Vietnam Veterans Readjustment Study data and found higher PTSD scores in Vietnam veterans who reported having killed in comparison to those who stated not having killed, regardless of whether the killing occurred in traditional combat form or not. As well, PTSD scores of Vietnam veterans involved in atrocities were higher than the PTSD scores of Vietnam veterans who reported only witnessing atrocities. Finally, after controlling for general combat experience, higher PTSD was also found in Veterans of the Iraq War who engaged in killing in comparison to those who did not (Maguen et al., 2010; Maguen et al., 2009). MacNair (2002) termed the coin *perpetration-induced traumatic stress* (PITS) to refer to PTSD resulting from the trauma of having committed a violent act.

Dekel et al. (2016) conducted a longitudinal study of veterans of the 1973 Yom Kippur War and found that, after controlling for PTSD symptoms level, guilt-induced distress predicted PTG in combat veterans but not in prisoners of war (POWs). In the only study located specifically on the relationship between killing in combat and PTG, Hijazi et al. (2015) found no differences in PTG scores between veterans who killed in combat versus those who did not, with the exception of the personal strength subscale where the former scored higher. Interestingly however the authors found a positive association between a heightened feeling of wrongdoing and PTG, which the authors contend may be explained by the concept of *moral injury*.

Developed by Litz et al. (2009), the term *moral injury* refers to the "lasting psychological, biological, spiritual, behavioral and social impact of perpetrating, failing to prevent or bearing witness to acts that transgress deeply held moral beliefs and expectations." (p. 697). According to Hijazi et al. (2015), veterans struggling with a moral injury may engage in important efforts to find new paths in life and to establish close connection with others, and may thus experience PTG. The authors contend however that: "despite the unique and complex nature of combat trauma exposure, there have only been a handful of studies investigating postcombat growth in this population." (p. 396), more is needed. As well, a call is made by the authors for therapy with combat veterans that focuses not only on the psychological distress caused by victimization (fear) but that also addresses moral, existential and spiritual issues as relates to perpetration and other combat acts, and that attends to growth possibilities.

Evans et al. (2018) studied the relationship between PTG and potentially morally injurious events (violation by self, violation by others, perceived betrayal), using the Moral Injury Event Scale (Nash et al., 2013), in a sample of 155 U.S. military veterans at a large VA medical center. Violations by self were positively associated with PTG, while overall potential moral injurious behavior exposure (such as betrayal by others) was not. The authors hypothesize that violation by self may lead one to become more connected to personal values and, therefore, to report greater PTG in the domains of realignment of life priorities, increased appreciation in life, and increased sense of personal strength (although the relationship between moral injuries and specific domains

of PTG was not explored). The authors strongly advocate for future research into "values-aligned living in experiences of thriving versus suffering" (p. 18) following potential moral injurious exposure.

Mansfield, McLean, and Lilgendahl (2010) define traumas as events that happen *to* an individual, which causes psychological or physical harm and which is characterized by emotions such as fear, anxiety and sadness. Transgressions, on the other hand, are defined as events in which an individual *acts* in a way that violates one's morals and likely results in negative self-conscious emotions such as shame and guilt. The authors claim that trauma and transgressions challenge the self in different ways. Traumas involve loss of something valuable to the self such as, one's life, health or loved one. Transgressions impacts one's feelings and opinion of one's self, often leading to a belief in a "bad self" (p. 251). Given these differences, the authors claim that individuals will process the two types of events differently.

Trauma related to Peacekeeping. Peacekeeping also poses unique challenges to the soldier. United Nations (UN) peacekeeping emerged during the Cold War as a response to conflicts between states and with the aim of assisting conflict-ridden countries in establishing conditions for the maintenance of peace and security. The three basic principles of UN Peacekeeping are: 1) consent of the parties; 2) impartiality; and 3) non-use of force except in self-defence and in defence of the mandate (UN, 2018a).

The number of UN peacekeeping operations has grown steadily since the establishment of the UN in 1945. A total of 52 UN peacekeeping operations have taken place to date and an additional 15 peacekeeping operations are currently underway (United Nations, 2018a). Accompanying this growth in the number of UN peacekeeping operations is an ever-expanding role for UN peacekeepers. Multidimensional peacekeeping operations today involve the maintenance of international peace and security but also may include facilitation of the political process, protection of civilians, assistance with disarmament, demobilization and reintegration of former combatants, provision of support for the organization of elections, the protection and promotion of human rights, and the provision of assistance in the restoration of the rule of law (United Nations, 2018b). Traditional peacekeeping involved instead soldiers serving as impartial observers, and "buffers" during the negotiation and implementation of a peace process between adversaries. Modern peacekeeping missions today are, in contrast, more complex, occurring in conflict-laden environments and are often dangerous (Raju, 2014).

For those peacekeepers with active contact with former warring factions and local civilians during their peacekeeping mission, common stressors associated with duties include being confronted with direct threats to one's physical well-being, and being exposed to psychological and spiritually threatening events (Adler, Litz, & Bartone, 2003). Bartone, Adler, and Vaitkus (1998) list five dimensions of peacekeeping-related psychological stress: threat/danger, ambiguity, powerlessness, isolation and boredom.

Some stressors associated to peacekeeping are typical of a war zone but others are more closely associated with peacekeeping operations, such as getting accidentally caught in a cross fire between warring parties, or becoming the subject of intimidation or deliberate provocation by a feuding faction (Litz, Maguen, Tankersley, & Hundert, 2016). In addition, in peacekeeping, the direct enemy may not be clear or visible. As Souza et al. (2011) report, it is “not rare” (p. 309) for peacekeepers to be attacked by the same population they are there to help. The most notable difference between war combatants and peacekeepers however, is the requirement and necessity for peacekeepers to uphold restraint, given Rules of Engagement associated with UN peacekeeping operations (Souza et al., 2011). Almost half of peacekeepers studied by Orsillo, Roemer, Litz, Ehlich, and Friedman (1998) reported that the need to exercise restraint during their mission in Somalia and dealing with changes in rules as to use of force, was "quite a bit" or "extremely" frustrating.

For soldiers trained for combat, peacekeeping duty often also leads to a role conflict. In traditional warfare, the soldier mobilizes aggression to fight a clearly identified enemy. In contrast, during peacekeeping operations, the peacekeeper must control his or her aggression even when exposed to highly hostile or provoking situations. Professional and political ramifications if one loses control over one’s emotions can be serious which, according to Mehlum and Weisaeth (2002), may explain the provocations of conflicting parties. Keskinen and Simola (2015) state that the unique features associated to modern-day peacekeeping render it one of the most demanding

and stressful work environments. As Dag Hammarskjold, former UN secretary general and father of modern-day peacekeeping along with former Canadian Prime Minister, Lester B. Pearson, famously stated: “Peacekeeping is not a soldier’s job, but only a soldier can do it.” (Raju, 2014, p. 149).

Psychologically and spiritually threatening events associated to peacekeeping duties include being exposed to death, decaying bodies and the witnessing of killings and atrocities, at times involving highly vulnerable victims such as young children (Adler et al., 2003; see as well Stéphane Grenier, 2018, a poignant autobiography of mission experiences of a former Canadian peacekeeper including his journey once back home). Raju (2014) refers to the term *double helplessness* to describe the powerlessness the peacekeeper may experience “helplessly witnessing helpless people” (p. 151).

Souza et al. (2011) conducted a meta-analysis of 12 studies on peacekeeping to explore the estimated prevalence of PTSD among peacekeepers and found a pooled prevalence estimate of 5.3%, and a range from 0.05% to 25.8%. Meta-regression methodology applied to investigate variables that could account for the heterogeneity between the studies included in the meta-analyses failed to explain it. As such Souza and colleagues concluded that evidence for a summary estimate of PTSD in this population is non-existent. The authors reiterated on the importance of creating standards for PTSD evaluations among peacekeepers given current variation in study methodologies (i.e. in terms of timing of PTSD assessment post-deployment, and in screening tools used).

More research is required specifically on the relationship between peacekeeping-related traumatic events and mental health rather than on the impact of peacekeeping alone. Sareen et al. (2007) analyzed data from a 2013 Canadian Forces Mental Health Survey (a cross-sectional, population-based survey of a total of 8441 CAF active military) and found a positive association between deployments in which there was combat or exposure to atrocities and 12-month mental health disorders. After adjusting for the effects of exposure to combat and witnessing atrocities, deployment to peacekeeping operations alone was however not associated with increased prevalence of mental disorders.

Demographic Variables Associated with Greater Posttraumatic Growth

Demographic variables found to be associated with greater PTG include: female sex (Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010), younger adult age (Linley & Joseph, 2004) and minority status (Helgeson et al., 2006). Demographic factors related to PTG in U.S. combat veterans are: younger age (Pietrzak et al., 2010), married status (Mitchell et al., 2013), and ethnic minority group membership (Hijazi et al., 2015; Maguen, et al., 2006; Mitchell et al., 2013). As concerns the latter, Hijazi et al. (2015) in their study with U.S. veterans from all eras, found that the largest difference between Caucasian and minority veterans was in the spiritual change dimension of PTG. Citing research indicating the more central role of religion in the lives of minorities (Blaine & Crocker, 1995; Ferraro & Koch, 1994; as reported in Hijazi et al., 2015), the authors hypothesize that the faith and/or spirituality of minority veterans, including the

social support they receive from their religious communities, may provide a means for the former to re-establish meaning, reconnect with others, and discover new life paths for themselves, thereby leading to their growth.

Theories of Posttraumatic Growth

Functional-Descriptive Model. The most popular and comprehensive theoretical model of PTG is Calhoun, Cann, & Tedeschi's (2010) Functional-Descriptive Model (FDM), also referred to as Transformational Model in the scientific literature. The FDM draws on the work of Janoff-Bulman (1992). The latter developed the Shattered Assumptions Theory which refers to three core assumptions that may be shattered by trauma: the assumption that the world and people are benevolent; that the self is safe, worthy and has a future; and that events are predictable and meaningful. The Shattered Assumptions Theory calls for the rebuilding of shattered assumptions post-trauma, using cognitive and emotional processes (Janoff-Bulman, 1992). The FDM describes PTG as the process and outcome of the rebuilding of one's assumptive world, leading to a better withstanding of future shocks following a "psychologically seismic event" (Tedeschi & Calhoun, 2004, p. 5). Important to the concept of PTG is therefore not the event itself, but the extent to which the event threatens the individual's assumptive world.

The FDM has undergone several reiterations since the construct of PTG was first introduced with the publication of the PTGI (Calhoun, et al., 2010; Tedeschi & Calhoun, 1995, 2004). In the 2004 version, Tedeschi and Calhoun elaborate on the process of

PTG, which emphasizes the role of cognitive engagement and reprocessing in promoting authentic growth following adversity. The FDM postulates that, at first, distressing ruminative activity takes place post-event that is automatic and intrusive in nature as the individual struggles to comprehend the event. The individual's social support network provides however encouragement and assistance with coping and with disengagement from pre-trauma goals that may no longer be tenable. Over time, the intrusive ruminations are therefore replaced by more deliberate ruminations as the individual engages in narrative development that leads to positive re-interpretation, benefit-finding, and meaning-making. Importantly, the theory contends that although growth occurs, distress may also continue to be present that may be highly emotional in nature. Included is an ability to accept some of the paradoxes of life such as: loss leading to gain, feeling more vulnerable yet stronger, discovering both the worst and best in others, and mortality becoming more salient and yet feeling more alive in terms of a more fully developed and satisfying philosophy of life (Tedeschi, Calhoun, & Groleau, 2015). Tedeschi and Calhoun (2004) describe the transformative experiences as having an "affective component, so that the lessons learned are not merely intellectual reflections." (p. 5). Despite this, the FDM of PTG has been criticized for being overly cognitive (McMillen, 2004).

In Calhoun and Tedeschi's (2006) article on the FDM, the role of distal and proximate cultural factors in the promotion of growth is emphasized. Distal cultural factors refer to broad cultural themes that predominate in larger societies, providing a

framework for the individual to make sense of his or her traumatic experience and its aftermath. For instance, McAdams (2001) refers to a predominant American cultural narrative of redemption (the idea that good will come out of bad), which is conducive to PTG. Similarly, Kitayama, Markus, Matsumoto, and Norasakkunkit (1997) refer to the tendency towards self-enhancement in American culture (which may lead to illusory PTG) and towards self-criticism in the Japanese culture (potentially leading to less PTG).

In contrast to distal cultural elements, proximate cultural factors refer to one's primary reference group, those with whom one comes into more regular contact, who can serve as role models and with whom one will self-disclose or exercise social restraint depending on the quality of the relationship or how one is received. Finally, Calhoun et al. (2010) refer to the role of schema and narrative development in the growth process and to wisdom as a growth outcome.

Organismic Valuing Theory of Posttraumatic Growth. A second model of PTG is Joseph and Linley's (2008) Organismic Valuing Theory of Growth through Adversity (OVTG), which shares many features with the FDM. For instance, both theories are derived from the eudemonic philosophic tradition and were influenced by the work of Janoff-Bulman (1992). Both PTG theories refer to a cognitive struggle with trauma-related information as a result of challenged core assumptions, characterized by initial intrusive ruminations followed by deliberate ruminations. Finally, both theories refer to

the importance of social support in facilitating PTG. OVTG addresses, however, why individuals are motivated to grow (Joseph & Linley, 2006). Joseph and Linley (2005) explain the organismic valuing process as follows:

> refers to people's innate ability to know what is important to them, their own best directions in life that will lead them toward greater well-being and a more fulfilling existence. The organismic valuing process is premised on the idea that people are naturally evaluative of their ongoing experiences. People consistently evaluate implicitly, and sometimes explicitly, whether their current experiences and actions are fulfilling their needs. (p. 271)

Central to the OVTG model is the need for self-determination, as presented in Deci and Ryan's (1980) Self-Determination Theory. Self-determination refers to the motivation of individuals to take action to remedy the situation, and promote wellbeing when their needs are not being fulfilled.

The OVTG accounts for both PTSD and PTG. Given that humans have an intrinsic motivation towards actualization, in the OVTG model, symptoms of PTSD are said to represent natural information processing (Horowitz, 1997), in which early efforts to assimilate trauma-related information within pre-trauma beliefs, if unsuccessful, are followed by the creation of new core beliefs in one of two directions. Positive accommodation (PTG) is said to occur in social contexts conducive to meeting the individual's basic psychological needs for autonomy, competence and relatedness (Deci & Ryan, 2000). Negative accommodation (PTSD) is said to take place in the absence of a social environment supportive of the individual's needs and values (Joseph & Linley, 2005). This supposedly occurs due to the completion tendency (Horowitz, 1997) that keeps traumatic contents in active memory until integration can occur.

Affective–Cognitive Processing Model of Posttraumatic Growth. Recently, Joseph, Murphy, and Regel (2012) modified the OVTG, to propose an Affective–Cognitive Processing Model of PTG which refers to cognitions, appraisals, and emotional states occurring in a repetitive cyclic fashion until discrepancies between pre-trauma assumptive world views and post-trauma information are resolved through assimilation, positive or negative accommodation.

Cognitive Adaptation Model of Posttraumatic Growth. PTG may however also reflect a form of coping that buffers one's experience of distress rather than authentic growth. Taylor's (1983) Cognitive Adaptation Model contends that the adjustment process following a stressful event involves the creation and maintenance of positive illusions around three themes: 1) the search for meaning as relates to the experience; 2) an attempt to regain mastery over the event and over one's life; and 3) an effort to restore self-esteem. Meaning is obtained by applying causal explanations to one's experience (whereas the real cause may be unknown) and restructuring the meaning of one's life around the event. Mastery involves believing that one has control and can exert behavioral control over the threat. Finally, self-esteem is restored through self-enhancements that involve identifying personal benefits as relates to the experience and by using downward social comparisons (Taylor, 1983). The PTG construct may therefore represent a positive illusion rather than authentic growth (Frazier et al., 2009). Some empirical support exists for illusory PTG (McFarland & Alvaro, 2000).

Janus-Faced, Two-Component Model of Posttraumatic Growth. Although self-deceptive, it is important to note however that the illusory side of PTG is not necessarily associated with maladjustment. Maercker & Zoellner (2004) have proposed a Janus-faced, two-component model of PTG: early illusory coping followed by authentic growth, studied, in part, by comparing self-reports of PTG to reports of PTG corroborated by significant others (Shakespeare-Finch & Enders, 2008). Zoellner and Maercker (2006) contend that: "If the illusory perception of PTG co-exists with deliberate thinking about the trauma and does not preclude active coping efforts, then, it may serve as a short-term adaptive palliative coping strategy." (p. 640). However, if illusory PTG persists over time, as a form of avoidance, it will negatively impact adjustment. In the Janus-faced, two-component model of PTG therefore, successful coping involves an increase of the constructive, self-transforming component of PTG and a decrease of illusory component of PTG over time. This model may explain why longitudinal studies on PTG have typically revealed positive relationships with psychological adjustment whereas cross-sectional studies have been more inconclusive. According to Zoellner and Maercker (2006), in longitudinal studies, the constructive side of PTG may have had a chance to manifest itself, in contrast to cross-sectional studies where the constructive and the illusory sides of PTG may have been be present in a variety of degrees.

The Janus-faced, two-component model of PTG is consistent with Taylor (1983) who maintains that: "successful adjustment depends, in a large part, on the ability to

sustain and modify illusions that buffer not only against present threats but also against possible future setbacks" (p. 1161). Contrary to the common presentation of illusions as maladaptive in the scientific literature, Taylor alludes to the evolutionary significance of positive illusions, stating that these contribute to maintaining the self as a highly organized information processing system, promoting behavioral persistence when the individual is confronted with adversity. Finally, the term "illusion", as applied in the PTG literature, may also be misleading given that world assumptions can also be considered illusions, albeit adaptive ones, until a traumatic experience renders them no longer tenable.

The Janus-faced, two-component model of PTG is consistent with the more recent work of Bonanno and Burton (2013) on regulatory flexibility, which refers to one's sequential ability to be sensitive to one's context, to apply a diverse repertoire of regulatory strategies in response to adversity, and to be responsive to feedback. According to these authors, the current emphasis by some researchers on the primacy of specific regulatory strategies as consistently more adaptive and healthy, in comparison to others, is "a fallacy of uniform efficacy" (p. 591). What is more important to stress adaptation is one's flexible use of diverse self-regulatory strategies across situations and time (Bonanno & Burton, 2013). Kashdan and Rottenberg (2010) apply the similar term *psychological flexibility* to refer to one's ability to recognize and adapt, shift mindset or behavioral repertoire, maintain balance and be open and committed to actions aligned with one's values.

Action-Based Posttraumatic Growth. According to Zoellner and Maercker (2006), studies demonstrating meaningful trauma-related behavioral change post-event would contribute to the validation of PTG concept. Hobfoll et al. (2007) have argued that cognitive processing alone cannot fulfill the individual's basic need for autonomy, for competence and relatedness (Deci & Ryan, 2000) that may have been undermined as a result of trauma. PTG may require meaningful behavioral action as well. Armour (2010) found that, due to the horror experienced, Holocaust survivors she studied were unable to create meaning through cognitive processing alone and demonstrated instead PTG in the form of behavioral meaning-making. Terms such as *survivor mission* (Herman, 1992) and *altruism born of suffering* (Staub & Vollhardt, 2008) have been used to describe action-based PTG. Finally, the health behavior changes commonly found in cancer survivors (e.g. Harper et al., 2007) may also be indicative of authentic action-based PTG (Sumalla, Ochoa, & Blanco, 2009).

Meaning-Making Model of Posttraumatic Growth. Finding meaning is considered essential to growth following adversity. Park (2010) presents an integrated model of meaning making in the context of stress. The author divides meaning into two categories: global meaning (one's general orienting system, beliefs and goals) and situational meaning (meaning attributed to specific situations). In the Meaning-Making Model of PTG, adversity leads to discrepancies between global and situational meaning. Search-for-meaning processes take place to resolve this discrepancy leading to meaning-

made in the form of perceived growth and/or positive life changes. Alternatively, the failure to find meaning leads to adjustment problems (Park, 2010).

Posttraumatic Growth as a Meaning Construal. Janoff-Bulman and Frantz (1997) describe the PTG process, more specifically, as involving a shift from trying to *comprehend* the traumatic event (why did it happen?) to finding *significance* (what personal meaning/value can I extract from the experience?). A longitudinal study of people coping with the loss of a family member, conducted by Davis, Nolen-Hoeksema, and Larson (1998), found that both the construals of meaning-as-comprehensibility and meaning-as-significance predicted adjustment following the loss of a family member. The two construals involved however distinct psychological processes and were found to be independent. Meaning-as-significance was operationalized as benefit-finding, which was associated to optimism and longer term adjustment. Meaning-as-comprehensibility, on the other hand, was operationalized as sense making and was found to be associated to religiosity and shorter term adjustment.

Thornton (2002) agree that benefit-finding and sense-making are distinct, a distinction that is not always made in studies on PTG. These authors argue that benefit-finding however involves a form of positive illusion. Indeed, Sears et al. (2003) found no correlation between benfit finding (identification of benefits, number of benefits) and PTG, whereas positive appraisal coping measured at the beginning of the study predicted positive mood, better perceived health at 3 and 12 months, and PTG at 12 months. The

authors conclude that “both hope and positive reappraisal coping reflect more active, intentional attempts to pursue outcomes, whereas optimism and identification of benefit may reflect stable, positive outcome expectancies, without the effortful component.” (p. 494). Sumalla et al. (2009) contend that intentional and continuous active effort in the form of positive re-appraisals, sense making and accommodation following a perceived severe threat and ensuing feelings of vulnerability result in authentic growth in the form of positive identity change. Benefit-finding, on the other hand, according to these authors, reflects a positively biased assimilative process in which the individual defends himself or herself against a threat to their sense of coherence and self-esteem. Tennen and Affleck (2002) state that the conceptualization by theorists of benefit-finding as a form of denial or maladaptive reality distortion is however an untested assumption.

Posttraumatic Growth as Active Coping. Tennen and Affleck (2002) argue that benefit-finding, and by extension, possibly PTG, in terms of searching for and reminding one’s self of benefits following adversity, may represent an active coping strategy. The authors state however that this hypothesis also has yet to be adequately studied. Currently the scientific literature confounds benefit finding as a perceived conclusion or result post-event with benefit-finding as a form of active coping (Tennen & Affleck, 2002).

Posttraumatic Growth as Personality Change. Jayawickreme and Blackie (2014) note that most current theoretical formulations of PTG involve the experience of

meaningful changes in the individual's characteristic and enduring patterns of thoughts, feelings and behaviors following adversity (i.e., Tedeschi & Calhoun, 2004). As such, PTG refers to the transformative, positive impact that adverse events can have on an individual's personality (Blackie et al., 2017). Blackie and colleagues state however that current PTG measurements have significant limitations that preclude the quantifiable assessment of PTG as personality change. That is, current retrospective self-report measures of growth do not permit the ruling out of alternative explanations for the nature of PTG (i.e., PTG as a form of self-enhancement or, alternatively or as psychological flexibility that allows one to adapt to the changed situation and to mobilize necessary psychological resources to shift one's perspective and address one's needs; Jayawickreme & Blackie, 2014).

Posttraumatic Growth as an Identity-Making Narrative Processing. McAdams and Pals (2006) emphasize, more specifically, the role of identity in personality development and in PTG. The New Big Five Theory of Personality defines personality as a dynamic and developing system that is biologically and culturally shaped and that incorporates three distinct levels of functioning: 1) dispositional traits (the person as actor); 2) characteristic adaptations (the person as agent), and 3) integrative life narratives (the person as author; McAdams & Olson, 2010). In the latter researchers' words: "Personality traits sketch a dispositional outline of psychological individuality; adaptations fill in the motivational and social-cognitive details; and life stories speak to the full meaning of the individual life." (p. 519). The work of Pals (2006a, 2006b,

2006c) illustrates how life story research can be applied to explore growth post-adversity as a narrative identity-making process.

Identity can be defined as "an enduring theory or set of meanings that one constructs about oneself and that provides a sense of continuity, integration, and purposeful connection to the adult world." (Lilgendhal, 2015, p. 490). The term identity has been applied in a variety of ways in social science research, requires more conceptual clarity (Ho & Goh, 2018) and the development of a common taxonomy (Côté, 2006). The two dominant perspectives currently adopted in studies of identity are the psychological and the sociological perspectives (Côté, 2006). Psychological theory is focused on the study of *personal identity* (culturally relevant roles, political affiliations, etc.) and *ego identity* (integration of beliefs about the self to create a sense of personal continuity or sameness across time; McLean & Syed, 2015). Sociological research, on the other hand is focused on *social identity*, which emphasizes the relational or the interactions between the individual and his or her milieu (Côté, 2006).

McLean & Pasupathi (2012) describe two well-developed psychological theories in the domain of identity: the *identity status* (Marcia, 1966) and *narrative identity* paradigms (McAdams, 2001), both of which derive from Erikson's (1968) life span theory of psychosocial development. The identity status model is said to best capture personal identity (McLean & Syed, 2015) and focuses on "capturing snapshots" (McLean & Pasupathi, 2012, p. 9) of the identity developmental process of individuals

in a given time. The narrative identity model is said to best capture ego identity (McLean & Syed, 2015) and is more focused on the processes of identity building, such as studying how identity commitments are reached or achieved (McLean & Pasupathi, 2012). A call has recently been made for the integration of these two approaches "to realize a broader and deeper understanding of identity development." (McLean & Pasupathi, 2012, p. 23). Finally, identity refers to how one defines one's self over time, and as such differs from more transient beliefs about the self and the world (Brewin, Garnett, & Andrews, 2011).

As per the narrative tradition, Pals (2006a) claims that a central challenge in adult life is to construct and maintain a sense of narrative identity: "a coherent, meaningful, and integrated story of who you are, how you came to be that person, and where you are headed in your imagined future" (p. 101). This life story is not based on concrete facts but refers instead to one's subjective internalized narrative, which includes one's reconstructed past, perceived present, and anticipated future (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001).

Habermas and Bluck (2000) found that autobiographical reasoning, or the active drawing of connections between past events and the current self, contributes to constructing both self-coherence and self-continuity. As such, autobiographical reasoning is considered a key process to narrative identity development. Autobiographical reasoning, a reflective thinking process, has been positively associated

to maturity and wellbeing (McLean & Mansfield, 2011) as well as to PTG (McLean & Pratt, 2006). Finally, narrative processing and autobiographical reasoning have been shown to facilitate change in psychotherapy (Singer & Bluck, 2001).

The life story, as an identity-making process, begins in late adolescence and young adulthood, continues throughout most of the adult life course, and reflects the "individual's narrative understanding of self in culture" (McAdams et al., 2001, p. 475). Identity processes best explain the mechanisms of continuity and change in personality that takes place in people over the life course. Lilgendhal (2015) states that no account of personality development is therefore complete without considering the role of identity.

According to Lilgendhal (2015), optimal personality development in adulthood involves two distinct trajectories: adjustment (competence, good functioning, emotional stability, well-being) and maturity (cognitive complexity, personal growth, emotional awareness and wisdom). A well-adjusted personality, Lilgendhal argues, develops to the extent that one forms a positive story about self-development, retrospectively and prospectively. In emerging adulthood (Arnett, 2000), this occurs as a result of identity exploration and identity commitments built on experiences that provide for positive self-definition (Roberts & Caspi, 2003). During this developmental stage, when negative events occur, given that identity is not yet fully formed, there is more flexibility in terms of shifts to one's identity commitments. In later adulthood, however, a committed

identity is to a larger extent in place that is relied on for meaning and for stability (Lilgendhal, 2015). As such, negative events are more likely, during this phase, to lead to narrative disruption (Neimeyer, 2004) and to the destabilization of one's world assumptions and roles. For growth to occur, one therefore must resort to narrative processing and identity revision post-adversity (Lilgendhal, 2015).

Rubin, Berntsen, and Hutson (2009) write that events that violate cultural norms, as to the typical content of a life story, create the sense of serious current threat experienced by trauma sufferers. For these authors therefore, contrary to the more popular theories of PTSD that refer to the disorder as the result of fragmentation or a lack of integration of the traumatic memory (Brewin, Dalgleish, & Joseph, 1996; Ehlers & Clark, 2000; Horowitz & Solomon, 1975), PTSD occurs when the trauma becomes overly integrated or "too central to the cognitive organization of the life story and identity of the person." (Bernsten & Rubin, 2006, p. 228). The Centrality of Event Theory postulates that the emotional and distinctive aspect of traumatic memories renders them highly accessible. The need for self-consistency then can cause trauma memories to become a reference and turning point for the organization of autobiographical knowledge, aligning the survivor's interpretation of previous/present experiences and expectations for the future with trauma-related appraisals (Rubin et al., 2009). The loss of culturally sanctioned social roles following adversity, and the divergence created in one's expected life path, can lead to the adoption of a new identity or social role as trauma sufferer (Rubin et al., 2009). Event centrality, or the extent an

individual believes an event has become a core part of his or her identity, is therefore an important factor associated with response to adversity (Berntsen & Rubin, 2006). Agency (individual goals and achievement), communion (social connectedness), generativity and redemption (a bad life scene is followed by a good outcome) versus contamination (a good scene is followed by a bad outcome) are prominent life story themes (Adler et al., 2015). In the narrative approach, PTG specifically involves the construction of a redemption narrative following adversity (McAdams et al., 2001), which may lead to generativity (McAdams, Diamond, de St. Aubin, & Mansfield, 1997).

More specifically, Pals & McAdams (2004) describe PTG as an identity-making, narrative and transformational process, in which the individual engages with and works through the trauma and subsequently constructs a positive and coherent ending. Similarly, Sumalla et al., (2009) specify that in real growth positive accommodation leads to positive identity change whereas in illusory growth the traumatic experience is assimilated in a positively biased manner to "defend one's identity as its coherence, sense and self-esteem come under threat." (p. 27).

Singer and Blagov (2004) describe the engagement of the three subsystems of personality in the narrative processing of past experiences. The cognitive system addresses the content, structure and format of the narrative. The affective system addresses the feeling the narrative evokes, whereas the motivational system addresses what goals are activated in the narrative and the function the narrative serves for the

person. Pals (2006b) analyzed the narratives of midlife, mostly White college-educated American women who wrote about their most difficult and identity-challenging life experience and identified a two-step narrative process, required in combination for self-transformation to occur. Exploratory narrative processing refers to the open acknowledgement and exploration of the destabilizing impact of the event on the self, "embracing the negative emotional response" (Pals & McAdams, 2004, p. 66) rather than minimizing the impact of the event. Positive resolution refers to the construction of a positive ending for the story that provides coherence and resolution and involves the re-establishment of one's capacity to feel positive emotions in the present following the post-event experience of negative emotions (Pals, 2006b). Figure 1 presents the different forms of narrative identity processing that take place following difficult life experiences, as identified by Pals (2006b).

Transformational processing (term applied by Pals, 2006b), or PTG, as reflected in the upper right quadrant in Figure 1, is distinct from other types of self-growth narratives in that it is central to identity but also richly developed, given the level of narrative processing undertaken (exploratory processing *and* positive resolution), leading to maturity as a potential personality outcome (Lilgendhal, 2015). King, Scollon, Ramsey, and Williams (2000), for instance, conducted a longitudinal study with 87 parents of children with Down's syndrome and found that a sense of closure coupled with accommodation was associated with stress-related growth. Storytelling by the distressed parents characterized by a struggle with meaning was observed, followed by meaning-

made post-adversity that led to an eventual positive ending. The positive ending was however an experience of eudemonic well-being (insight, wisdom) rather than subjective well-being (happiness or life satisfaction; King et al. 2000).

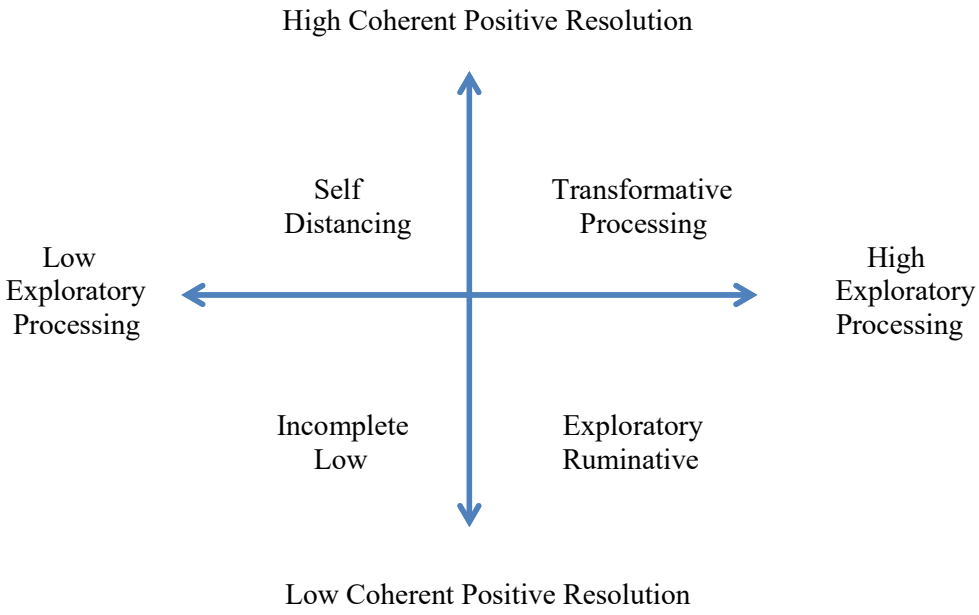

Figure 1. Pals' (2006b) model of individual differences in narrative identity processing of difficult life experiences (p. 105).

Lilgendhal (2015) claims that traits such as openness to experience and extraversion create a combined, higher-order mega-trait or plasticity (DeYoung, 2010) that moderates this optimal path to a positive identity. In contrast to ruminative exploration, which is characterized by repetitive identity questions devoid of answers and progress towards identity commitment or revision, openness is said to involve adaptive reflective exploration (Luyckx et al., 2008). Extraversion then refers to the

ability to co-construct a positive life story in collaboration with others, through sharing and listening (Lilgendhal, 2015). This retelling of meaningful stories assists in the development and maintenance of identity (McLean, Pasupathi, & Pals, 2007). Staugaard et al. (2015), however found that openness predicted PTG in their study with Danish veterans whereas extraversion did not. The authors contend therefore that high extraversion may be instead a predictor of resilience.

Tedeschi and Calhoun (1996) found a modest association between the Big Five personality traits of extraversion and openness and PTG. Engelhard et al. (2015) found that higher extraversion scores before deployment and more stressors related to deployment was positively associated with greater PTG in Netherland soldiers who served in Iraq. Linley and Joseph (2004) conducted a literature review of 39 empirical studies of PTG, stress-related growth, perceived benefit, and thriving, and reported a positive association between PTG and four of the Big Five constellation of personality (McCrae & John, 1992): extraversion, openness to experience, agreeableness, and conscientiousness. The fifth constellation of personality, neuroticism was found, on the other hand, to be negatively associated with growth (Linley & Joseph, 2004). Other researchers also discovered a significant inverse relationship between neuroticism and PTG in individuals with physical illnesses (Evers, et al., 2001; Garnefski, Kraaij, Schroevers, & Somsen, 2008). Others reported no relationship between neuroticism and PTG (Engelhard et al., 2015; Helgeson et al., 2006; Tedeschi & Calhoun, 1996).

Garnefski et al. (2008) recognize the role of extraversion as a predictor of PTG but claim that the *interrelationships* between personality traits such as extraversion, openness and conscientiousness may better predict PTG and that the study of the high correlations between these Big Five personality traits should be a focus of future PTG research. Finally, Karanci, et al. (2012) studied the effects of the Big Five personality traits and posttraumatic stress severity on domains of growth, in a large stratified cluster community sample of 969 adults from Turkey who experienced diverse traumatic events. The researchers found robust associations between the personality traits of openness, agreeableness and conscientiousness and total PTG as well as with most PTG domains. The association between PTG and the personality traits of extraversion and neuroticism were however moderated by posttraumatic stress severity. Under high PTS severity: 1) high extraversion facilitated growth in all domains, except for the appreciation of life factor; and 2) low neuroticism fostered growth in the spiritual change and the relating to others domains. The latter finding modifies previous findings of a null (Helgeson et al., 2006; Linley & Joseph, 2004, Tedeschi & Calhoun, 2004) or negative (Evers et al., 2001; Garnefski et al., 2008) relationship between neuroticism and PTG, indicating that better attendance to moderators in the relationship between personality traits and PTG is required.

Finally, in their respective meta-analytic studies, Helgeson et al. (2006) and Prati and Pietrantoni (2009) both found a moderate relationship between optimism and PTG, although the effect size reported by Prati and Pietrantoni (2009) is slightly smaller. In

their evidence-based review article, Rajandram, Jenewein, McGrath and Zwahlen (2011) found both optimism and hope to be positively associated to PTG and argue that these personality traits render the individual more receptive to social support and enhanced positive coping methods including positive reappraisal, religious coping, and problem-based coping. In their systematic analysis of 12 PTG studies in the context of health trauma, Bostock, Sheikh, and Barton (2009) also report a positive relationship between optimism and PTG. However, according to these authors, the relation between these two distinct and independent constructs remains unclear and requires further study. Jayawickreme and Blackie (2014) warn as well that results from early studies linking optimism and growth were confounded because items in the original Life Orientations Test assessing optimism (Scheier & Carver, 1985) overlapped with those in the measures of growth-related constructs.

Narrative constructs such as event centrality are believed to facilitate sense-making via cognitive processing, a re-examination of one's values, and narrative re-organization (Boals, Schuettler, & Southhard-Dobbs, 2015; Brooks, Graham-Kevan, Lowe, & Robinson, 2017; Fitzgerald, Bernsten, & Broadbridge, 2016). Staugaard et al. found that centrality to highly emotional events regardless of valence and openness to experience combined may lead to a balanced view of life, leading to positive outcomes. Finally, McLean, Syed, Yoder and Greenhoot (2016) point to the importance of also considering the different content within individuals' identities: the ideological (occupation, values, religion, politics) and interpersonal (family, friends, dating, sex

roles, recreation). These authors found that when two or more identity contents are present within a self-defining memory, more meaning-making is observed. Identity domains that intersect in life story narratives can therefore help with the achievement of a coherent sense of self (McLean, et al., 2016).

In terms of the veteran population, Marotta-Walters et al. (2015) claim that developmental tasks associated with Erikson's (1959) eight stages of psychosocial development may be applied to explain trauma outcomes. The authors explain that veterans typically begin their military deployments in late adolescence and early adulthood. They therefore typically find themselves in stages five, six or seven of Erikson's psychosocial model, when one of the following developmental tasks are addressed: Identity vs. Role Confusion, Intimacy vs. Isolation, and Generativity vs. Stagnation respectively. According to Marotta-Walters et al., traumatic events can lead to developmental arrests, and these, in turn, can impair the "metabolization of traumatic experiences and prevent growth." (p. 357). Indeed, Taylor and Baker (2007) found that veterans with PTSD showed greater evidence of arrested psychosocial development than those without PTSD. Finally, persistent identity diffusion has been observed in some veterans (Silverstein 1994, as cited in Marotta-Walters et al., 2015). Marotta-Walters and colleagues revealed a significant and positive indirect pathway from posttraumatic symptoms to PTG through negative psychosocial development among veterans who experienced combat-related trauma. The proposed mediation model accounted however for only 14.8% of the variance. Nonetheless, this area of study has interesting potential.

The Cognitive Growth and Stress Model. The Cognitive Growth and Stress Model (CGAS) of PTG, proposed by Brooks et al. (2017), adds *control perceptions* as an additional cognitive processing element in PTG. In their study with a sample of 250 survivors of a diverse range of adverse events, Brooks and colleagues found that both present and future control positively predicted PTG. The authors recommend that clinicians therefore: 1) target cognitions that enhance the survivor's control perceptions as part of the rebuilding of the assumptive; 2) guide survivors towards more constructive ruminative processes; and 3) remain attentive to central event valance, which has the potential to either lead to growth or distress.

Frazier and Caston (2015) found however that present, past and future perceptions of control are more adaptive if they better match objective event controllability. In their study with college students, the authors found that, for events where there was less objective control, perceived past and future control was associated to less self-reported growth, as measured using the Stress-Related Growth Scale. In contrast, where more event controllability was present, perceived future control was positively related to growth and perceived past control unrelated to adjustment. Present control, on the other hand, was consistently associated with better adjustment regardless of objective event controllability. Frazier and Caston claim therefore that clinicians should help survivors attend to present aspects of stressors that they can control (their thinking and coping) and discourage survivor focus on what they could have done differently to have a better control in the past or what can be done differently in an attempt to control the future.

Relationship between Post-Traumatic Stress Disorder and Posttraumatic Growth

Several studies have demonstrated that PTG and PTSD can co-exist in trauma victims (Zhou, Wu, & Zhen, 2018). To date, positive associations between PTSD and PTG have been reported by some researchers (Kilmer et al., 2009) whereas others have found that PTG is unrelated or negatively related to PTSD (Barton, Boals, & Knowles, 2013). Finally, an inverted "U" association between PTSD and PTG has also been demonstrated, indicating that intermediate PTSD symptom severity leads to greater growth (i.e. Levine, Laufer, Hamama-Raz, Stein, & Solomon, 2008).

In their systematic review of research studies dating up to September 2014, Schubert, Schmidt and Rosner (2016) observed higher PTG in trauma survivors with PTSD in comparison to controls with trauma exposure but no PTSD. The observed curvilinear relationship between PTSD and PTG was however unclear given the sparse number of studies included in the review. A second meta-analytic study of PTSD and PTG, covering the period from January 1996 to November 2015, demonstrated a positive relationship between the two constructs (Liu, Wang, Li, Gong, & Liu, 2017). The authors caution clinicians therefore to not ignore individuals demonstrating high PTG in their practice as these may also present with high concurrent PTSD symptomatology. Alternatively, clinicians need to also be attentive to signs of PTG amongst ongoing distress (Shakespeare-Finch & Lurie-Beck, 2014). Finally, a most recent study conducted with adolescents who survived the 2008 Wenchuan earthquake in China, revealed three PTSD-PTG relationship patterns: 1) a negative association

between PTSD and PTG in the growth group, suggesting PTG as a coping strategy to alleviate PTSD symptoms; 2) a positive association between PTSD and PTG in the coexistence group, suggesting a positive effect of PTSD on initiating growth; and 3) a mutually independent relationship between PTSD and PTG in instances where symptoms may have been too low to trigger cognitive processes that can lead to growth (Zhou, et al., 2018).

Shared Predictors of Post-Traumatic Stress and Posttraumatic Growth

Shared predictors of PTSD and PTG include: 1) perceived severity of an adverse event as threatening; 2) disruptions to one's world assumptions; and 3) engagement in cognitive processing to address these disruptions.

Perceived Severity of the Event and Posttraumatic Growth. In their meta-analytic study, Helgeson et al. (2006) report a positive association between both objective and perceived event severity and PTG. Widows, Jacobsen, Booth-Jones, and Fields (2005), on the other hand, found a positive association between subjective concerns about mortality and PTG in a sample of patients with bone marrow transplants, whereas objective mortality risk was not related to PTG. Similarly, Cordova, Cunningham, Carlson, and Andrykowski (2001) found a positive association between perceived threat posed by breast cancer and PTG but no relationship between disease and treatment variables and PTG. The latter authors claim therefore that subjective appraisal of threat may be a more important determinant of cancer-related growth than

objective measures of cancer severity. Meanwhile, in a longitudinal study conducted by Sears et al. (2003) with early-stage breast cancer survivors, greater perceived cancer stress and longer diagnosis duration at study entry were both related to PTG one year later. According to these researchers "findings are consistent with the hypothesis that more intensive initial engagement with a stressor, coupled with more time to process the stressor, facilitates posttraumatic growth" (Sears et al., 2003, p. 494).

In the veteran population, Marotta-Walters et al. (2015) also found a positive association between perceived threat and PTG. Meanwhile, Maguen et al. (2006) identified perceived threat as a significant predictor of PTG but only in the Appreciation of Life domain of PTG in their sample of U.S. veterans. According to the latter authors, veterans studied, who felt that their lives were in danger during their deployment, may have developed a greater appreciation for the value of their own life upon returning home.

Challenged Core Beliefs and Posttraumatic Growth. Other than perceived threat, individuals who have known adversity are believed to also experience a cognitive threat, often conceptualized as a shattering of one's assumptive world. The notion of the "shattering" of world assumptions put forward by Janoff-Bulman (1992) has however not been supported by empirical research (Dalgleish, 2004; Park, 2010). Park (2010) cites several studies that have demonstrated some shifts in global beliefs from pre- to post-stressor, but "although these scattered reported differences are statistically

significant, they are typically small, perhaps suggesting some violation rather than full-blown shattering." (p. 284).

Cann et al. (2010) claim that challenged core personal beliefs, or the *extent* to which personal adversity causes one to re-evaluate one's assumptive worlds, initiate PTG. The Core Beliefs Inventory (CBI) developed by Cann et al. (2010) measures therefore *disruptions in* rather than the *shattering of* one's core assumptions. The nine-item CBI requires that responders indicate, using a six-point Likert scale, to what degree the event(s) experienced were powerful enough to 'shake their world', leading them to seriously examine their core beliefs about the world, others, themselves and their future. In testing the new measurement, Cann et al. found that disruption of core beliefs, as measured using the CBI, was strongly related to PTGI total score and to each of the five factors of the PTGI, in all but one instance and across all three studies conducted. Furthermore, disruption of core beliefs reported soon after the stressful experience was a reliable predictor of later PTG.

Challenged core beliefs, as measured using the CBI, have been found to be positively associated to PTG in additional cross-sectional studies with college students (Groleau, Calhoun, Cann, & Tedeschi, 2012; Lindstrom, Cann, Calhoun, & Tedeschi, 2013; Triplett, Tedeschi, Cann, Calhoun, & Reeve, 2012). Challenged core beliefs were also associated with increased PTG in a study conducted with 169 breast, prostate, and colorectal cancer survivors (Caspari, et al., 2017). Furthermore, follow-up analyses

revealed that when perceived cognitive threat and physical threat were both entered into a regression equation, only cognitive threat was significant (Caspari et al., 2017).

In terms of U.S. veterans, Morgan et al. (2017) found challenge to core beliefs to be positively associated with PTG and negatively related to Satisfaction of Life. Dekel et al. (2011), on the other hand, administered six of the eight subscales of the World Assumption Scale (WAS; Benevolence of the World, Benevolence of People, Belief in a Just World, Self- Worth, Self-Controllability, and Luck) to Israeli ex-POWs of the 1973 Yom Kippur War and found no significant relationship between any of the assumption measures and PTG, with the exception of a positive association between growth and the belief of self-controllability. Self-controllability was also positively associated to anxious attachment and inversely related to hardiness, leading the authors to suspect that the growth observed may have been defensive in nature. Problems with the temporal stability and construct validity of the WAS have however been reported (Kaler et al., 2008).

Finally, Jayawickreme and Blackie (2016) argue that future research on PTG should also consider to a greater extent how events that result in an increased awareness of one's mortality might lead to growth. Terror Management Theory postulates that our self-esteem and worldviews help us function in our daily lives and help us avoid otherwise overwhelming fear and anxiety associated to death and suffering. The recently developed Anxiety Buffer Disruption Theory posits that PTSD results from a disruption

in one's anxiety-buffering mechanisms, or our normal cognitive defenses used to protect against anxiety in general and death anxiety particularly, leading to overwhelming anxiety, re-experiencing, hyper-arousal, and avoidance (Pyszczynski & Kesebir, 2011). On the other hand, coming close to death also provides the potential for a revision of values or to "*worldview capitulation"* (Cozzolino, 2006, p. 279), resulting in greater meaning and engagement in life (Cozzolino, 2006).

Cognitive Processing. Cognitive processing is central to the evidence-based treatment of PTSD, which includes the use of therapeutic approaches such as Cognitive Processing Therapy (Resick, Monson, & Chard, 2008). A positive relationship between cognitive processing and PTG has also been reported across different studies (Linley & Joseph, 2004). The type of cognitive processing, however, that occurs in PTSD and PTG differs.

Pathway towards Posttraumatic Stress and Posttraumatic Growth

A growing number of empirical models have recently been tested that attempt to map the cognitive pathway towards PTG versus PTSD following adversity. The development of a conceptual framework of the posttraumatic process can be useful in guiding clinical practice.

Rumination. Rumination is used to revise or restore individual beliefs about the world that were broken or altered by the traumatic event (Janoff-Bulman, 1992). PTG

researchers identify two main types of rumination (Cann et al., 2011; Tedeschi & Calhoun, 2004). Intrusive ruminations are "unsolicited invasions of one's cognitive world—thoughts about an experience that one does not choose to bring to mind." (Cann et al., 2011, p. 138), and deliberate ruminations are constructive thoughts that are "engaged in voluntarily and can be focused purposefully on trying to understand events and their implications" (Cann et al., 2011, p. 138).

Triplett et al. (2012) found that threats to core beliefs, measured using the CBI, were associated to both intrusive and deliberate rumination and that intrusive rumination, occurring in the immediate aftermath of trauma, may "serve as an impetus" (p. 407) for subsequent deliberate rumination. The authors obtained empirical support for the FDM of PTG, identifying time as an important variable in understanding the relationship between the different types of rumination and PTG. Taku et al. (2009) explored the relationship between PTG and intrusive rumination soon after the event, recent intrusive rumination, deliberate rumination soon after the event, and recent deliberate rumination in both U.S. and Japanese samples. Intrusive rumination soon after the event was positively related to PTG but a hierarchical multiple regression analysis indicated that recent deliberate rumination most strongly predicted current levels of PTG in both U.S. and Japanese samples. The authors therefore hypothesized that intrusive ruminations soon post-event sets the stage for later deliberate cognitive processing.

Nithingale, Sher, and Hansen (2010) found both shared and separate pathways to psychological distress and PTG in a sample of individuals with an HIV diagnosis. Past intrusive cognitive processing was directly associated to PTG, whereas past deliberate cognitive processing was directly related to psychological distress. Recent intrusive cognitive processing was however directly related to posttraumatic distress, whereas recent deliberate cognitive processing was directly related to PTG. The results reveal that intrusive rumination may be necessary in the immediate aftermath of a trauma as part of the process of PTG, however, deliberate engagement in cognitive processing soon after the event may be premature leading to psychological distress (Nithingale et al., 2010).

Positive Appraisals. Hanley, Garland, and Tedeschi (2017) argue that positive reappraisal is also linked with increased PTG, but that it has not been modeled in existing studies, in relation to core posttraumatic constructs such as core belief disruption, intrusive rumination, deliberate rumination, posttraumatic stress and PTG. The authors conducted a study to explore associations between these constructs, investigating in addition the impact of contemplative practice involvement on the relationships between the constructs. Results mostly supported previous findings as to how core belief disruption can function as a catalyst for intrusive and deliberate rumination; intrusive rumination being primarily associated to posttraumatic stress whereas deliberate rumination being primarily related with PTG. More importantly, however study findings suggest that dispositional mindfulness and positive reappraisal

should also be included into established pathway models of PTG given that they increase the model's explanatory power. Garland (2007) found that mindfulness assists with adaptation to adversity by enhancing positive reappraisals, which can in turn facilitate meaning-making and growth. The Mindfulness-to-Meaning Theory states that mindfulness involves decentering, or shifting from the contents of thoughts and emotions related to a distressing experience to a metacognitive awareness that acknowledges thoughts and feelings for simply what they are: thoughts and feelings rather than facts about one's self or the world. This shift allows for a gradual movement away from initial negative appraisals of the adverse event towards positive reappraisals. Mindfulness practice then also promotes stronger moment-to-moment experience and acceptance, leading to the "experiencing of distress in a more in-depth manner, both cognitively and emotionally." (Xu, Ding, Goh, & An, 2018, p. 16) which in turn, facilitates meaning-making. The broadened attentional awareness and accompanying positive reappraisals then lead to more positive emotions, which may result in pro-social behaviors, and ultimately to a greater sense of purpose or meaning in life (Garland, Farb, Goldin, & Fredrickson, 2015).

Both Helgeson et al. (2006) and Prati and Pietratoni (2009) found a positive association between positive appraisal and PTG in their respective meta-analytic studies, although the effect size in Prati and Pietratoni's study was a little lower than that of their colleagues. The longitudinal study conducted by Sears et al. (2003) revealed a positive association between positive reappraisal at study entry and PTGI scores obtained in

women 12 months following their primary medical treatment completion for early-stage breast cancer. Similarly, in another longitudinal study, Widows et al. (2005) found that positive appraisal before a bone marrow transplant predicted PTG an average of 2 years later.

Centrality of Event. Boals, Schuettler and Southard-Dobbs (2015) contend that centrality of event sets the stage for cognitive processing or re-examination of values and beliefs. The CGAS theorizes that increased levels of intrusive rumination following adversity leads to the event becoming central to the survivor's identity, and that this centrality then initiates cognitive processes in the form of deliberate rumination and perception of control, resulting in eventual PTG (Brooks et al., 2017). The latter applied structural equation modeling techniques to assess the shared and unique role of intrusive rumination, deliberate rumination, present and future perceptions of control, and event centrality in predicting PTG and post-traumatic stress. The authors found that increased intrusive rumination was associated with greater distress and preceded more deliberate ruminations. Deliberate rumination was positively associated with PTG but, surprisingly, did not predict, PTG. According to the authors, study participants were therefore possibly able to contemplate some good in the event, but had not yet experienced a positive shift in worldview, leading to new meaning. Deliberate rumination thus may lead to a reassessment of the event, while positive reappraisal alone may provide the necessary reorientation for growth to occur (Brooks et al., 2017). In their study, Brooks and colleagues found, more specifically, that present and future

control positively predicted PTG. Finally, event centrality robustly predicted both PTG and distress, mediated both the positive relationship between intrusive and deliberate rumination and the positive association between intrusive rumination and posttraumatic stress. These findings are consistent with the pathway to PTSD and PTG identified by Lancaster, Klein, Nadia, Szabo, and Mogerman (2015), which also identifies centrality as a facilitator of cognitive processing following a traumatic event.

To obtain a better understanding of the differences of the role of event centrality in PTSD and PTG, Schuettler and Boals (2011) conducted stepwise multiple regression analyses and found that PTG was best predicted by event centrality, problem-focused coping and a *positive* perspective of the event, whereas PTSD symptoms were best predicted by visceral reactions to the event, event centrality, avoidant coping and a *negative* perspective of the event. Similarly, Banks and Salmon (2013) found no reduction in psychological functioning in young adult subjects who demonstrated event centrality but who connected their low experiences to positive characteristics or positive developments in the self. Finally, Lilgendhal, McLean, and Mansfield (2013) found that a combination of low neuroticism and the belief that personality could change through one's own efforts predicted self-growth in trauma narratives. According to Pals (2006a), important to self-growth therefore is not whether one connects the self to a negative emotional experience but rather "how the individual interprets the impact of the experience on self-development" (p. 115).

Coping Strategies. Problem-focused coping refers to efforts to address the situation and the causes of stress in practical ways. In the scientific literature on coping and stress, problem-focused coping strategies are generally associated with more favorable adaptation whereas emotion-focused coping strategies are associated with greater psychological distress (Tuncay & Musabak, 2015). Stanton, Kirk, Cameron, and Danoff-Burg (2000) contest however the conclusion of a negative association between emotion-focused coping and poor adjustment outcomes. The authors argue that the coping and stress literature have included under the same rubric of emotion-focused coping both avoidance and approach coping methods and that some of these forms of emotion-focused coping are in fact inversely correlated. As well, the authors claim that popular measures of emotional-focused coping are contaminated with distress-laden and self-deprecatory content, which may explain in part the reported association of emotion-focused coping with psychopathology or maladjustment.

Lyne and Roger (2000) report that the current emerging pattern in the coping literature, is towards a reduction to three to four replicable coping style constructs. The authors recommend the following three: active, emotional and avoidance coping. Javed and Dawood (2016) found a significant positive relationship between problem focused coping (planning, active coping, religion and instrumental support) and PTG, and between active emotional coping (acceptance, humor, venting, emotional support, positive reframing) and PTG in 90 patients with myocardial infarction from India. Avoidant emotional coping (self-distraction, denial, behavioral disengagement, self-

blame, and substance misuse), on the other hand, was found to have a significant negative relationship with PTG. Widows et al. (2005) used the Coping Responses Inventory (Moos, 1993) to explore the relationship between coping and PTG and found that approach-focused coping (Logical Analysis, Positive Reappraisal, Seeking Guidance and Support, Problem Solving), before a bone marrow transplant predicted PTG an average of 2 years later. However, the same researchers also demonstrated a positive relationship between avoidance-based coping (Cognitive Avoidance, Acceptance or Resignation, Seeking Alternative Rewards, and Emotional Discharge items), measured prior to bone marrow transplantation, and later PTG. Meanwhile, Scrignaro, Barni and Magrin (2011) using the Brief COPE as a measure of coping, found that PTG was associated to avoidance-based coping (Humor, Distraction) in Time 1 and to problem focused coping (Active Coping and Planning) in Time 1 and 2 in a sample of cancer patients. According to these authors, the following finding is consistent with the Janus two-face model of PTG (Zoellner & Maercker, 2006) in which PTG may be characterized by illusions post event that may have a self-enhancement and "palliative" function which then must be transformed into constructive problem-solving for positive adjustment to occur (Scrignaro et al., 2011). In the veteran population, a prospective study with Israeli ex-Prisoners of War of the 1973 Yom Kippur War found that active coping during captivity, measured retrospectively, predicted PTG.

García, Páez, Reyes-Reyes, and Álvarez (2017) conducted an examination of the moderating role of positive and negative religious coping on changes in PTG and

posttraumatic stress over time, in 211 Chilean adults exposed to highly stressful events. Positive religious coping includes benevolent religious reappraisals that provide the individual with meaning as concerns the event, and the seeking of spiritual support and religious forgiveness (from God). Negative religious coping includes spiritual discontent (e.g. feeling abandoned by God) and punitive religious reappraisals, such as feeling punished by God (Pargament, Smith, Koenig, & Perez, 2011; as cited in Chan & Rhodes, 2013). Positive religious coping was found to predict positive outcomes (an increase in PTG) whereas negative religious coping was found to predict negative outcomes (an increase in posttraumatic stress, particularly when the severity of the stress was medium high). Study results also indicated that: 1) religion, as a means of coping, has positive effects other than those associated with the receiving of social support; and 2) positive religious coping may have a compensatory feature; at a high level it may "neutralize" the negative effects of low social support on PTG (García et al., 2017).

Harris et al. (2008) explored the association between operational (behavioral) and dispositional (trait-like) religious variables and PTG, in a church-going community sample with self-reported trauma exposure. Seeking Spiritual Support (approach behaviors) was positively related to PTG. Religious Strain (dispositional distancing in relationship with one's higher power and others, blame, guilt, etc.) was positively related to posttraumatic symptoms. Ogden et al. (2011) replicated the Harris et al. (2008) study with a population of 110 U.S. Veterans who recently returned from combat and demonstrated similar findings: the Seeking Spiritual Support factor predicted higher

levels of PTG and the Religious Strain factor predicted higher levels of PTSD symptoms. The authors concluded that the structure of personal religious functioning may be similar for both military and civilian trauma survivors and that addressing spiritual concerns may be important in the treatment of mental health problems for both populations. Finally, religiosity was identified as a strong positive correlate of PTG in two meta-analytic studies of PTG (Helgeson et al., 2006; Prati, & Pietrantoni, 2009).

Criticism of Current Research on Posttraumatic Growth

Methodological Issues. Other than the methodological issues previously addressed in regards to commonly used PTG measures, additional criticisms of research on PTG, as put forth by Jayawickreme and Blackie (2016), are: the cross-sectional nature of most studies of PTG, their traditional small sample sizes, and the lack of a "no-trauma" control. As well, the authors argue that, while there are a steadily increasing number of longitudinal studies on PTG, many of these studies do not obtain baseline measures of PTG, choosing instead to measure the construct as an outcome variable at different points in time. Finally, while there are a few prospective studies on PTG, these are, in large part, only semi-prospective in that study participants have already experienced the negative event (Jayawickreme & Blackie, 2016). The authors summarize as follows: "we do not have the empirical evidence yet to make any conclusive judgments about the nature and ubiquity of posttraumatic growth" (p. 15).

Measurement of time since event has also varied in current studies of PTG

(Jayawickreme & Blackie, 2014). This is problematic given that PTG may manifest differently (i.e., as illusory or authentic) depending on time of measurement (Zoellner & Maercker, 2006). Needed are prospective longitudinal studies able to document the development of actual and perceived growth, and how the two types of growth may co-vary over time.

Frazier et al. (2009) conducted one of the only prospective, longitudinal studies that examined the relationship between perceived and actual PTG, pre and post trauma. The authors studied, specifically, 122 undergraduates who experienced a traumatic event between Time 1 and Time 2 (2 months interval), and a matched comparison group of 122 no-trauma students. Traumatic events were identified using the Traumatic Life Events Questionnaire, which describes events in behaviourally descriptive terms consistent with DSM IV posttraumatic stress disorder stressor criterion A (Kubany et al., 2000). Actual growth (defined as pre- to post-trauma changes in scores on various PTG-related items) and perceived growth (defined as Time 2 scores on the PTGI) was measured. The authors considered that if the PTGI measured actual growth, PTGI scores should have been at least moderately correlated with pre- to post-trauma changes in scores on the various PTG-related items reworded by Frazier et al. (2009) to reflect current PTG. However, a weak correlation of only .22 was found. As well, higher PTGI scores (perceived growth) were associated to greater increases in distress while actual growth was associated with decreased levels of distress, as measured using the Depression Anxiety Stress Scales (DASS21; Lovibond & Lovibond, 1995). This

suggests that self-reported PTG may be a coping strategy for dealing with distress rather than reflective of authentic growth (Frazier et al., 2009).

The prospective longitudinal design of the Frazier et al. (2009) study is considered a "gold standard" (Jayawickreme & Blackie, 2016, p. 27) for measuring change following trauma. Gunty et al. (2011) replicated Frazier et al.'s (2009) study, this time to determine possible moderators of the relation between perceived and actual growth. Potential moderators explored were neuroticism and self-esteem at Time 1 and distress and life satisfaction at Time 2. In the trauma group, the correlation between perceived and actual growth was high for the less distressed group and almost null for the more distressed group. Those who reported more distress and less life satisfaction after a traumatic event were therefore less accurate at rating how much they had actually grown since the event than those who were less distressed and more satisfied after the trauma (Gunty et al., 2011). As well, more distressed individuals from the trauma group with lower life satisfaction at T2 overestimated the amount of growth they experienced, especially when negative change pre- to post-trauma was indeed experienced. These results add to the work of Frazier et al. (2009) in that they demonstrate that retrospective self-reports of growth are fairly accurate among some individuals but not others, which is consistent with Zoellner and Maercker's (2006) notion that PTG may have both constructive and illusory aspects (Gunty et al., 2011).

Illusory versus Authentic PTG. New directions for PTG research have been recommended that include a move away from cross-sectional retrospective studies and towards more prospective longitudinal studies, such as those mentioned above, that help distinguish illusory from authentic PTG (Jayawickreme & Blackie, 2016; Tennen & Affleck, 2002). Additional studies have also been called for that assess PTG using daily process methods such as experience sampling and study reports of PTG as corroborated by significant others (Jayawickreme & Blackie, 2016).

Process versus Outcome. FJayawickreme and Blackie (2016) propose bringing more clarity to the PTG construct by separating PTG *process* variables from *outcome* variables and using different terms to refer to the two in the PTG literature. They speculate, for instance, that PTG may actually be an outcome of higher cognitive functioning and behavior, associated with character virtues such as wisdom that involve generative behavior and reflective knowledge. Similarly, King and Mitchell (2015) argue that current measures of PTG relate to the *feeling* that one has grown and that what may be more important is to track actual ego development, defined as the level of complexity with which one experiences oneself and the world following adversity. These authors refer however to growth as a process. They explain that: "Accommodation is the presumed mechanism underlying changes in ego development over time." (p. 316) and that examining the stories people recount about difficult life experiences can be utilized to measure the process of accommodation, illustrating the revising of meaning structures that leads to change (McAdams & McLean, 2013 as cited

in King & Mitchell, 2015). Pals and McAdams (2004) argue, more specifically, that PTG may be conceptualized as an "identity-making narrative process" (p. 68).

The Role of Social Factors in Posttraumatic Growth. To date scientific studies have focused largely on cognitive elements that lead to distress or growth following adversity. In future pathway modeling, the role of social and relational factors in facilitating or hindering PTG will also need to be considered.

Attachment. The "metabolizing" of traumatic experiences or of one's personal way of responding to trauma, according to the Shattered Assumptions Theory which serves as a basis for both FDM and OVTG, for instance, is based on early experiences of attachment, which determines to what extent trauma becomes associated with growth or persistent psychological distress. More specifically, the Shattered Assumptions Theory stipulates that secure and insecurely attached individuals have learned unique ways of responding to danger and distress and that these experiences become incorporated in one's early working models of the self's worth, of the benevolence of others and the safety of one's environment. These models then become activated when one faces a danger to one's safety and integrity (Bowlby, 1980; as reported in Salo, Qouta, & Punamaki, 2005).

Attachment refers to a specific aspect of the relationship between the child and parent in which the caregiver is utilized as a secure base from which to explore, and as a

safe haven in times of threat (Benoit, 2004). Adult attachment style can be measured based on one's position on two primary dimensions: anxious attachment (degree to which one fears the other will not be available in time of need) and avoidant attachment (degree to which one feels the need to maintain independence and distance due to mistrust in relationships; Mikulincer & Shaver, 2007). People who score low on both dimensions are said to have secure attachment styles (Mikulincer & Shaver, 2007). Healthy attachment helps individuals manage adversity (Bryant, 2016). Anxious attachment however triggers hyper-activating, emotion-regulation strategies characterized by negative emotions and ruminations as relates to threats. In contrast, attachment avoidance involves the use of deactivating emotion-regulation strategies in an effort to down-regulate the attachment system, and is characterized by a denial of attachment needs and avoidance of emotional involvement with others (Mikulincer & Shaver, 2007).

Mikulincer, Shaver, and Horesh (2006) postulate that securely attached individuals may report more PTG, given positive models of the self and others that may render them more resilient and more prone to seek social support in time of need, which may result in a greater likelihood for trauma resolution and meaning-making following adversity. Indeed, several studies have found either a positive relationship between a secure attachment style and PTG (Salo et al., 2005; Turunen, Haravuori, Punamaki, Suomalainen, & Marttunen, 2014) or an indirect association (Schmidt, Blank, Bellizzi, & Park, 2012). In their study of 54 cancer survivors, the latter authors found that secure

attachment was significantly associated with active coping, positive reframing, and religion, all of which were associated with PTG. A regression analysis then suggested that positive reframing and religion as coping strategies may mediate the relationship between secure attachment and PTG. Arikan and Karanci (2012) however found no relationship between secure attachment and PTG, contending that a secure base may act as a buffer against traumatic reactivity following an event.

Several studies have found an inversed relationship between attachment avoidance and PTG (Arikan, Stopa, Carnelley, & Karl, 2016; Turunen et al., 2014; Xu, Fu, He, Schoebi, & Wang, 2015). Finally, Spielman and Taubman-Ben-Ari (2009) demonstrated a positive relationship between attachment anxiety and PTG. Mikulincer (1997; as cited in Spielman & Taubman-Ben-Ari, 2009) explains this counterintuitive finding, stating that individuals with anxious attachment adopt strategies to obtain reassurance and support from attachment figures when stressed, which may then lead to growth.

The number of studies on the relationship between attachment style and PTG remains negligible. More specifically, we have found no studies on the association between PTG and attachment in the military and Veteran population. This is surprising given the role of attachment in Shattered Assumptions Theory and the latter's role in PTG theory. Research on attachment style and PTG is highly relevant in military and veteran populations given both the latter's high rates of exposure to traumatic events, the *strong bonds* promulgated within the military, the painful *separations* from loved ones

during multiple deployments, and *relationship loss* due to possible casualties and of one's military "family" as one returns to civilian life post-deployment or career.

Unit cohesion, for instance has an important function in the soldier's life given the "transfer of attachment functions from parents to peers" (Mayselessx, 2004, p. 533) during the transition to military training. Joining a military unit can have a positive impact in reducing the effects of attachment anxiety by revisiting early attachment failures in young recruits (Mikulincer & Shaver, 2008; as cited in Brinton, 2016). Mikulincer and Florian (1995) found a positive association between secure attachment and perceptions of strength and active coping in Israeli soldiers in training, whereas insecure attachment was related to perceptions of threat, feelings of inadequacy and helplessness and less adaptive coping. As well, Mitchell et al. (2013) and Pietrzak et al. (2010) found that unit cohesion and unit member support during deployment respectively predicted growth in U.S. Veterans.

Finally, the study of the relationship between attachment styles and PTG is important given the highly social context of war and peacekeeping, sometimes characterized by horrific and prolonged interpersonal violence exhibited by others or by personal transgressions or perpetration of violence by the self. Mikulincer, Solomon, and Shaver, (2014) state that this prolonged trauma may impair the attachment system, impacting the individual's capacity to benefit from attachments.

Social Support. Studies examining the relationship between social support and PTG have yielded mixed results (Linley & Joseph, 2004). A possible reason for the inconsistent findings is the type of support measured. Schroevers, Helgeson, Sanderman, and Ranchor (2010) cite the importance of making a distinction in research studies between perceived availability of support, actual received support and degree of satisfaction with the support received. As well, a distinction should be made between different types of social support such as emotional, informational, and instrumental/ tangible support (Schroevers et al., 2010).

Studies of social support in the military population often make the distinction between deployment social support (self-reports of perceived assistance and encouragement in the war zone from the military in general) and post-deployment social support which refers to self-reports of emotional sustenance and instrumental assistance provided by family, friends, coworkers and employers following deployment (Maguen et al., 2006). Dekel et al. (2011) found no relationship between post-deployment social support and PTG. However, a positive association between post-deployment social support and PTG has been reported in other studies (Benetato, 2011; Tsai & Pietrzak, 2017). In their prospective study with U.S. Veterans, Tsai & Peitrzak (2017) found that strong post-deployment social support predicted high and sustained PTG over time. Forstmeier et al. (2009) found that social acknowledgement, as a survivor was a significant predictor of PTG in 103 former German child soldiers of World War II. Erbes et al. (2005) examined the relationship of functional support (social and

interpersonal connection or emotional support) and structural social support (degree of social contact with others) and PTG in U.S. veterans studied over a 12-year period. The authors found that *both* functional and structural social support predicted later PTG.

Pietrzak, et al. (2010) found that *unit member support during deployment*, measured retrospectively, predicted growth in a sample of older U.S. Veterans. Kaler et al. (2011) however failed to replicate this finding. Staugaard et al. (2015) measured social support both during and after deployment in their sample of Danish soldiers and found a positive association between social support during and post-deployment and PTG. The association was however relatively small in comparison to other predictors of PTG. Staugaard et al. (2015) therefore argue that social support may only be important to growth if it also leads to a greater integration of the emotionally difficult events. Studies on the role of self-disclosure in facilitating PTG are therefore required.

Self-Disclosure. Several studies have reported a positive relationship between self-disclosure about the traumatic event and PTG (Cordova et al., 2001; Dong, Gong, Jiang, Deng, & Liu, 2015; Hassija & Turchik, 2016; Kamen et al., 2016; Pietruch & Jobson, 2012; Taku et al., 2009). Taku et al. (2009) studied the relationship between desire to disclose, actual disclosure and PTG in Japanese undergraduate students who reported having experienced a traumatic event in the last ten years. In addition, the authors also examined the relationship between perception of the recipient's reaction to self-disclosure and PTG. Higher PTG was observed in those students who disclosed about

their event, regardless of their desire to disclose. As well, participants who perceived their recipients' reactions as involving mutual disclosure, encouragement and listening demonstrated higher PTG than those who reported a perception of recipient reactions of confusion or shock. These studies are supportive of Lepore and Kernan's (2009) expanded Social Cognitive Processing Model which stipulates that one's social environment can help individuals to assimilate negative information about their future, accommodate by changing their beliefs and expectations or alternatively, impede cognitive processing that aim to maintain or re-establish a positive view of the self and the world. No significant relationship between PTG and social constraint on disclosure was however found in several studies (Koutrouli et al., 2016; Nenova, DuHamel, Zemon, Rini, & Redd, 2013). Nenova et al. (2013) conclude therefore that social constraints (or negative social interactions) may be less relevant to positive outcomes than positive social interactions and/or may have an indirect effect of social on PTG.

Cross Cultural Considerations

Cross-cultural research findings indicate a universal, but also unique, aspects to the PTG construct (Weiss & Berger, 2010). Kashyap and Hussain (2018) warn that most of the empirical research on PTG has been addressed from a Western perspective. Although the theoretical concept of PTG appears to be cross-culturally valid, the authors also state that: "there has been a fundamental deficiency in operationalizing the concept in regard to cultures that are non-Western." (p. 51).

Splevins, Cohen, Bowley, and Joseph (2010) note that the bulk of the scientific literature on PTG comes from an *etic* perspective, which assumes that underlying psychological mechanisms are the same across cultures and that they can therefore be studied from the top down (i.e. tools developed and normed in the West can be effectively utilized with non-Western populations). This may be one explanation for why the five-factor analysis of the PTGI has not been fully replicated in non-Western samples (Splevins et al., 2010). Taku (2013) found that total scores on the PTGI were higher in the Americans than in the Japanese men studied. As well, PTGI items most indicative of growth in American versus Japanese men varied based on culture. The author recommended that future studies explore which items of the PTGI's 21 items are culture-specific or universal and which items are gender-specific or gender-neutral. This information can then be utilized in the future development of a scale to measure PTG that is more sensitive to gender and cultural differences.

Frazier and Kaler (2006) refer to a Western-bias towards self-growth. The relatively higher levels of PTG found among Americans in contrast to other cultures could be due to social pressure for finding positives out of negative events (Zoellner et al., 2008) or to self-enhancing tendencies, which Sato (2001) warns is characteristic of independent cultures but not of interdependent cultures. Finally, Splevins et al. (2010) refer to three aspects of the PTG process that reflect implicit cultural biases: challenges to the assumptive world, the need for cognitive consistency, and the completion tendency.

Challenges to the Assumptive World. The principle of basic life assumptions appears to be universal but different cultures may hold different core assumptions (Splevins et al. 2010). Johnson, Thompson and Downs (2009), for instance, found that core schemas involving safety and predictability did not apply to non-Western interpreters interviewed who experienced long-standing oppression. As well, the belief in a just world may also be specific to the West (Carboon, Anderson, Pollard, Szer, & Seymour, 2005).

The impact of trauma on world assumptions may also differ based on culture. Vázquez, Pérez-Sales, and Ochoa (2014) write that cultural context shapes the types of events that an individual is likely to experience as traumatic, and the stress appraisals and coping strategies they will adopt. The authors observe that Western academics link trauma and growth to discrete, identifiable traumatic events whereas in other cultures the expectation in regard to suffering is that it "may not be episodic or infrequent but continuous." (p. 60).

The Need for Cognitive Consistency. According to Splevins et al. (2010), the need to maintain a consistent sense of self may also be more relevant in independent cultures, where the private self is emphasized, in contrast to collectivistic societies where a flexible communal sense of self (the ability to maintain social roles) may be increasingly valued. Jobson and O'Kearney (2008) found, for instance, identity changes

in trauma survivors in independent cultures post trauma but no identity changes in trauma survivors from the interdependent cultures studied.

Finally, most studies examining the role of disruption of core beliefs in PTG have also been conducted in the West. It remains unclear if non-Western populations experience the same level or type of disruption and re-examination of core beliefs as a result of adversity. The lower levels of PTG found among the Japanese, for instance, may indicate that their core beliefs are not challenged to the same degree as those of Americans. This may be explained by Japanese cultural norms that value modesty and being "ordinary" (Ohashi & Yamaguchi, 2004).

Completion Tendency. Finally, the notion of self-actualization represented in the OVTG may be more representative of individualistic societies where autonomy is valued in contrast to more communal cultures where more socially cohesive behaviors are encouraged. Personal-social harmony, involving the sacrificing of self for the sake of the group, for instance, is emphasized in some non-Western societies such as in the Chinese culture (Yang, 2003; as reported in Splevins et al., 2010).

It is recommended that future research on PTG include more qualitative studies that can adopt a bottom-up understanding of growth in different cultures (Splevins et al., 2010). Qualitative study findings can then be applied in the development of more

culturally sensitive psychometric tools (Splevins et al., 2010). Vázquez et al. (2014) also invite clinicians to be culturally informed. They state:

> Whereas some societies value change, others value constancy. There are societies that encourage self-examination, self-criticism, and self-correction in the pursuit of an ideal (i.e., a fulfilled person) while others encourage inhibition or absence of conflict for the sake of personal or social harmony. Some societies value struggle and active coping, but others (usually labeled as fatalistic) have historically shown resistance through mechanisms of acceptance and continuity (Scott 1992; Martin-Baró 1996). […] Any intervention, societal or individual, must take into account the cultural and epistemological framework in which individuals live; otherwise, we would be imposing our world-view on others. (p. 69-70)

Military Culture

As concerns military and veteran populations, Meyer (2015) incites clinicians to ask clients if they have served in the military and to educate themselves on the subject of military culture to ensure optimal treatment. The author cites Johansen, Laberg, and Martinussen (2013), in stating that:

> The military is, assuredly, a culture. It has its own history, laws, values, traditions, language, and customs. Military members are indoctrinated at a young age, and military culture permeates almost every aspect of their lives, resulting in markedly high levels of acculturation; veterans who served for only a few years report strong identification with the military decades later. (Meyer, 2015, p. 416)

In the statement below, from the Canadian National Defense, the vocational nature of military service and the different pillars of this unique Canadian profession are described:

> The profession of arms in Canada is composed of military members who are dedicated to the defence of Canada and its interests, as directed by the Government of Canada. The profession of arms is distinguished by the concept of service before self, the lawful, ordered application of military

> force, and the acceptance of the concept of unlimited liability. Its members possess a systematic and specialized body of military knowledge and skills acquired through education, training and experience, and they apply this expertise competently and objectively in the accomplishment of their missions. Members of the Canadian profession of arms share a set of core values and beliefs found in the military ethos that guides them in the performance of their duty and allows a special relationship of trust to be maintained with Canadian society. (Chief of Defence Staff, 2003, p. 9)

Military Cultural Identity Formation and Saliency. As part of military training, teaching surrounding the military ethos involves clarifying for new recruits their important responsibilities that now set them apart from civilians, which include the development of a "fighting spirit" (p. 14) focused on mission success and the acquisition of expertise in select occupational areas but also in the development of critical judgement skills as concerns the appropriate use of military force (Chief of Defence Staff, 2003).

Finally, to ensure mission success, the military places a strong emphasis on unit cohesion. Green, Emslie, O'Neill, Hunt, and Walker (2010) describe the constructing of the new soldier identity during military training this way:

> New recruits are first dispossessed of their civilian role and then take part in a 'rite de passage' to acquire the role of effective soldier and internalise an appropriate self-image […] grounded in the rugged warrior ideal in which toughness, controlled aggression and endurance are paramount (Barrett, 1996). Key ingredients include being capable, reliable, loyal to peers, and in control, with the ability to 'soldier on' without complaint, however dangerous or unpredictable the circumstances. (p. 1480)

Cooper, Caddick, Godier, Cooper, and Fossey (2018) apply sociology theory to

describe: 1) the socialization of individuals into the military; 2) the gender ideologies applied to sustain a military culture; and 3) the influence of the latter in the forming of the military identity. The socialization of individuals into the military begins during basic training, which involves a distancing of the member from civilian life and their "deindividuation" (Smith & True, 2014, p. 147) in order to promote strong identification and affiliation with a new military family. This involves instilling the specific cultural values in the new family member of "duty, honor, loyalty and commitment to comrades, unit and nation." (Demers, 2011, p. 162) but also the cultivation of "military masculinities" (Cooper et al., 2018, p. 159) that promote attributes such as "physical and emotional toughness, stoicism, self-reliance, aggressiveness, and a robust sense of heterosexual identity (Bulmer, 2013; Hockey, 1986, 2003; Higate, 2003)." (p. 159). Finally, military identity is strengthened through the development of military capabilities, specific skills and aptitudes that lead to social status, which can then be beneficial or act as an impediment to military members as they transition to civilian life (Cooper et al., 2018).

Military Cultural Identity Threat. Military trauma poses an especially important threat to the military member's most salient role identity: his or her military identity. Thoits (1991) states that:

> individuals probably invest themselves in (or commit to) some social roles that they hold more strongly than others. Roles that are socioculturally appropriate in view of the individual's characteristics, that are prestigious or economically rewarding, and that are enacted competently (Hoelter 1983; Rosenberg 1979) are likely to be more salient in an individual's identity hierarchy than less normative, nonprestigious, or incompetently enacted roles.

> The more salient the role-identity, the more meaning, purpose, and behavioral guidance the individual should derive from its enactment, and thus the more that identity should influence psychological well-being.
>
> It follows from this argument that events or strains which disrupt or threaten to disrupt an individual's most salient role-identities (identity-threatening stressors) should be more psychologically damaging than stressors which disrupt or threaten less valued role involvements (i.e., those which are identity- irrelevant. (p. 105-106)

Binks and Cambridge (2018) conducted qualitative interviews with seven British military veterans and found that those veterans with a more salient military identity experienced a more difficult transition into civilian life. Cooper et al. (2018) explain that the transition to civilian life of military personnel involves navigating "a complex cultural transition" (p. 156) and add that, for those experiencing a premature transition due to medical (psychiatric) discharge, this navigation can be particularly "abrupt, complicated and potentially traumatic." (p. 166). McNally, Lasko, Macklin, and Pitman (1995) found that salient military identity in the form of the wearing of Vietnam War regalia (e.g. medals) in daily life was associated with increased difficulty in autobiographical memory retrieval memory in Vietnam War veterans with PTSD, and especially in response to positive trait cue words. Brewin, et al. (2011) applied a mixed methodology to explore whether the extent and valence of identity change, in 153 UK veterans in receipt of a war pension, was related to degree of military trauma exposure, PTSD and/or suicide attempts. The authors found that PTSD and suicidal behaviors was significantly associated to alienation from civilian life.

Importance of the Identity-Making Narrative Process in Posttraumatic Growth

The study of identity-making or development, as a psychosocial task, is important given that it has critical relevance for health and well-being throughout the life course (Galliher, McLean, & Syed, 2017). Berman (2016) emphasizes a need for more research specifically on the relationship between identity and trauma, which he categorizes as complicated. First, identity can impact one's interpretation of the traumatic experience. For instance, an individual with low self-worth may grow to believe that he deserves what transpired (Berman, 2016), thus, assimilating the adverse event into his existing negative identity. Second, trauma can also disrupt identity, becoming the focal point of one's identity post-adversity, either in the positive or negative direction, resulting therefore in either negative or positive accommodation. Marotta-Walters et al. (2015) argue that the study of identity disruption is particularly pertinent to the study of the military and veteran population impacted by PTSD

The narrative construct of event centrality (extent to which an event has become a turning point and central to one's identity and life story), as measured using the Centrality of Event Scale (Bernsten & Rubin, 2006) has been found to uniquely predict both PTSD symptoms (Barton et al., 2013; Bernard, Whittles, Kertz, & Burke, 2015; Boals, & Schuettler, 2011; Boelen, 2009; Brown, Antonius, Kramer, Root, & Hirst, 2010) and PTG (Allbaugh, Wright, & Folger, 2016; Bernard, et al, 2015; Boals, & Schuettler, 2011; Boals, et al., 2010; Groleau et al., 2012; Lancaster, Kloep, Rodriguez, & Weston, 2013; Roland, Currier, Rojas-Flores, & Herrera, 2014; Staugaard et al., 2015).

Boals and Schuettler (2011) contend therefore that experiencing an event as central to one's identity is like "a double-edged sword" (p. 818): event centrality is detrimental in that it leads to PTSD but it is also positive in that it can foster PTG. The increased availability of important autobiographical memories may facilitate cognitive processing and narrative re-organization that can lead to PTG (Boals, Schuettler, & Southard-Dobbs, 2015; Brooks, et al., 2017; Fitzgerald, et al., 2016), however a thorough understanding of this narrative identity re-organization, or pathway from posttraumatic stress to PTG is lacking.

Narrative identity reconstruction or growth post-adversity has been studied primarily in the scientific literature on cancer (Zebrack, 2000), and mostly in breast cancer (Cheung & Delfabbro, 2016; Helgeson, 2011; Kaiser, 2008), under the umbrella of cancer "survivorship". Zebrack writes that individuals diagnosed with cancer experience a "transitional event" (p. 240) that disrupts their pre-diagnosis life trajectories and social roles (as parent, employee, spouse, etc.), placing them on a new pathway or life trajectory. This new pathway can lead to identity disruption but also to identity enhancement. Zebrack notes, for instance, that today's advances in healthcare have led to a new cultural landscape in which the sick role, characterized by the relinquishing of personal responsibility for one's care and dependency, common in the 1950's and 1960's, has been in large part replaced by a new social role as a cancer survivor that entails "self-care, empowerment, consumer activism, improved access to information, and growth in mutual aid network." (p. 239).

Frank (2003) refers to two types of illness survivorship narratives: the *extensive responsibility* (p. 248) narrative in which illness centrality is maintained and applied in service to other ill individuals, and the *limited liability* (p. 249) narrative in which survivors choose to move beyond their illness into other aspects of their lives. In the mental health domain, the extensive responsibility illness survivorship narrative is manifested, in part, through the volunteer and occupational activities of peer support workers. Behavioral activation, characterized by the adoption of a new positive social role, the development of novel relationships and a renewed sense of purpose (such as engagement in peer helping or advocacy following adversity), has been described as action-based PTG by Hobfoll et al. (2007). These authors have called for the study of populations who exhibit not only cognitive but also behavioral manifestations of growth post-event, claiming that this will lead to a better distinction between illusory and genuine PTG.

Clinical Applications

Tedeschi and Calhoun (2013) propose the expert companionship model to help clinicians facilitate narrative identity development leading to PTG in trauma survivors. According to the FDM of PTG, the expert companion assists trauma survivors in recognizing the possibility of PTG, noticing growth themes in survivor narratives, labeling these, encouraging further constructive self-disclosure and the elaboration of a trauma narrative with PTG domains. This expert companionship model, applied in 2009 in the development of the online training component of the U.S. CSF Program requires

however more evidence to indicate its effectiveness (Steenkamp, et al., 2013).

Roepke (2015) conducted the first and sole meta-analysis comparing different types of psychological interventions for PTG reflected in the scientific literature to date, which she divided into three main categories: 1) written or spoken self-expression/disclosures; 2) cognitive-behavioral therapies for conditions such as PTSD, and 3) new psychosocial interventions that address PTG directly. Studies on the novel interventions that address PTG directly however did not meet study criteria due to a lack of randomized controlled trials or because they included non-trauma exposed participants. As such, none of these studies were included in the meta-analysis and their effects remain unclear. Meta-analytic study results indicate however that some of the two other types of interventions mentioned above, none of which were specifically designed to address PTG as a primary outcome, are effective in facilitating PTG. Individuals report growth, during exposure therapy, cognitive restructuring, stress management training, expressive writing, self-disclosure and couples interventions (Roepke, 2015). The meta-analysis was however limited by a small sample (only 12 studies met inclusion criteria), and, given low statistical power, detection of moderators was not possible. The study reveals that much remains unknown as concerns the type of interventions that facilitate growth, such as active ingredients of effective interventions, program length, format (group vs. individual) and theoretical orientation. Roepke concludes by stating that what is known is that: “Certainly, growth interventions will need to use subtle, sophisticated approaches that elicit PTG without dismissing

romanticizing." (p. 139). Similarly, Tennen and Affleck (2002) report that benefit-finding writing exercises provide positive results, but warn of the importance of not forcing positivity by stating the following:

> our research participants have mentioned repeatedly that they view even well-intentioned efforts to encourage benefit-finding as insensitive and inept. They are almost always interpreted as an unwelcome attempt to minimize the unique burdens and challenges that need to be overcome. (p. 594-595)

Finally, Harbin (2015), writing on the subject of psychiatric ethics surrounding the topic of PTG, warns of the risks associated with growth-oriented therapies, which may "stifle, ignore or disregard" (p. 678) the trauma survivors' experiences, or lead to the latter's perception of failure if their experience does not align with the five domains of growth specified in PTG research.

Shiyko, Hallinan, and Naito (2017) conducted a meta-analysis, which included 11 studies and a total sample size of 1195 participants patients with physical health diagnoses (mostly cancer), to determine the short-term effects of mindfulness training on PTG. Most studies employed mindfulness-based stress reduction or mindfulness-based cancer recovery as an intervention. A small cumulative effect size of 0.34 was found in PTGI scores immediately following the mindfulness-based interventions. In four studies, improvement in PTG was found primarily in the domains of Relation to Others and Appreciation for Life (small to medium effect size). Increased PTG was found in the spirituality domain in another five studies (medium to large effect size). Study results therefore reveal that mindfulness training has a positive impact on PTG in health

patients immediately following interventions lasting an average of eight sessions, regardless of intervention design or type. One study included in the meta-analysis however found no significant relationship between online mindfulness-based interventions and PTG. The statistical analyses revealed pre to post treatment increases in PTG regardless of group assignment, revealing that time might have had a greater effect on growth than the mindfulness intervention.

Other than the CSF, the only other psychotherapeutic intervention developed specifically to promote PTG in a veteran population, and the subject of a pre and post assessment, is the 10-session Structured Life Review Group for male veterans with combat-related PTSD (Vincent, 2010). Nine U.S. male veterans over 60 years of age participated in one of two identically designed groups. Group sessions included eight writing assignments designed to stimulate reflection, alternative ways of thinking, growth, and the integration of various aspects of life. Assignments addressed life stages and topics such as childhood, adolescence, benefit-finding related to trauma experience, meaning made from the trauma and advice for younger veterans, adulthood partnership/family, working life, retirement, and an integrative summary and evaluation. Group participants demonstrated significant levels of pre to post group intervention improvement in growth ($p = .006$) in the five growth areas with the exception of spiritual change ($p < .05$). At three-month follow-up, however, PTGI scores returned to baseline.

In their first national representative study of contemporary U.S. veterans ($n = 3157$), Tsai et al. (2015) found that greater social support, purpose in life and intrinsic

religiosity were independently associated with PTG, suggesting that clinical interventions designed to promote these factors should be applied to facilitate PTG in veterans with PTSD. More studies are required in this area.

Study Objectives and Clinical Relevance of the Study

In this research, Pals and McAdams (2004) conceptualization of PTG as an identity-making narrative process was explored. Described as transformational processing or a "springboard effect" by Pals (2006c, p. 176) rather than PTG, this two-narrative process consists of: 1) exploratory narrative processing (the recognition and exploration of the destabilizing impact of the event on the self); and 2) positive resolution (the construction of a positive ending for the story that provides coherence and resolution and involves the re-establishment of one's capacity to feel positive emotions in the present, as developed from the post-event experience of negative emotions).

The main objective of this study was to provide an illustration of PTG, as a narrative identity-making process, given that the narrative construct of event centrality (or the extent to which an event has become central to identity) has been identified in the scientific literature both as "one of the strongest and most consistent predictors of PTSD symptoms" (Boals, Schuettler, & Southard-Dobbs, 2015, p. 71) and as a significant unique predictor of PTG (Boals, Schuettler, & Southard-Dobbs, 2015). Research findings may be highly informative to clinical practice and may contribute to the

understanding of the role of event or narrative centrality in PTG.

A second objective of our research was also to provide a clearer definition of authentic versus illusory growth by studying PTG in a sample of peer support workers who adopted an extensive responsibility, illness survivorship identity and who, it can be said, exhibit action-based post-adversity growth rather than perceived or self-reported PTG alone.

A third objective of this study was to explore: 1) how threats to military identity are addressed by veteran peacekeepers released from service due to PTSD as part of the narrative identity-making PTG process; and 2) to what extent the socio-cultural milieu influences this process. This objective is relevant to clinicians providing mental health treatment to military and veteran populations with PTSD as well as to policy makers within national defense and veterans affairs departments.

A final study objective was to illustrate the usefulness of life story research to the study of PTG as a process.

Methods

Study Design

The study consists of life story research, which combines elements of case study and narrative methodologies (Lapan, Quartaroli, & Reimer, 2012). A case study design, consisting of a limited numbered of three participants, was adopted and was considered appropriate as a method for this research given the need to "examine the data closely both at the surface and at a deep level" (Ho & Gho, 2017, p. 4). As in Ho and Gho's qualitative study of the lived experience of four HIV patients in Singapore, in this case study design as well, the "sampling strategy is not one of representativeness but, instead, the small number was chosen to achieve vivid illustrative and illuminating insight." (p. 4) on the participants' lived experience of growth and, more specifically, their narrative identity revision and reconstruction post-trauma. Waters and Strauss (2016) have noted that: "Although quantitative designs can allow us to examine causal relationships and large-scale trends, they run the risk of airbrushing important differences experienced by individuals." (p. 118).

The narrative approach, involving a storytelling methodology, allows for the exploration of the *process* individuals apply to make meaning in their lives as concerns the self (Adler et al. 2017). More specifically, Adler and colleagues claim that narrative methods "allow for the *enactment* of meaning rather than a report of the *perception* of

meaningfulness." (p. 520). The latter is representative of current limitations in PTG research. Finally, life story research allows for the study of the individual's cultural context and personality development as well (Adler et al., 2017). McAdams (2012) notes that narrative analysis currently "enjoys considerable currency in cognitive science and in contemporary personality, developmental, social, clinical, and cultural psychology." (p. 15). The increased comprehension of PTG, obtained as a result of this qualitative study, involving the administration of a modified version of the Life Story Interview (McAdams, 2008), can inform psychotherapy as an identity-making narrative process (Adler, Harmeling, & Walder-Biesanz, 2013; Neimeyer, Herrero, & Botella, 2006).

Subjects

Participants consisted of three male Canadian Veteran peacekeepers who contributed in at least one Canadian peacekeeping mission in the 1990's. All three subjects were released from the CAF five to 14 years prior to the study and were in receipt of a disability benefit from VAC due to PTSD. All subjects held a senior rank at time of military release. Years of military service within the CAF ranged from 14 to 27 years. The participants were from different Canadian provinces.

All subjects reported having received some psychotherapy for their PTSD. Duration of the psychotherapy ranged from six sessions to six years. One participant also attended a six-week residential program for co-occurring PTSD and alcohol abuse.

None of the participants were engaged in psychotherapy at the time of data collection. Two of the three subjects however had regular psychiatric follow-up.

During the data collection phase of the study, participants were 48, 52 and 54 years of age respectively, were either married or in a common law relationship, and had children, including adult children, still living at home either full time or part time. Two of the participants held a college degree. The third had a high school degree. All participants were peer support workers (PSW) within a peer support program for CAF military and ex-military members with a service-related mental health condition, and self-identified as having experienced PTG as a result of traumatic events.

PSWs are defined in this study as veteran peer helpers with PTSD who offer peer support (active listening, accompaniment) to other veterans or active military persons with PTSD and/or other service-related mental health condition(s). CAF veteran peacekeepers with PTSD who offer peer support were chosen for this study given the lack of studies of PTG in Canadian veterans, the lack of studies on action-based PTG; and given the emerging research on growth in the peer helper population (Moran, Russinova, Gidugu, Yim, & Sprague, 2012).

Procedure

The doctoral student solicited research participation by sending a study invitation to potential participants using a national email list provided by a peer support program

for CAF military and ex-military members (Appendix A). An initial phone call was made to the three veterans who expressed interest in participating in the study and who met the selection criteria listed in the invitation, which included self-reports of lived experience with PTG. Self-identification was adopted as the procedure for locating study participants with reported PTG. This was done to avoid a potential suggestive bias in the qualitative study via the administration of the PTGI. The life story research methodology adopted for this study aimed to solicit instead *spontaneou*s themes of growth.

During phone calls to study participants, the doctoral student introduced herself, described the study (title, purpose, confidentiality, risks and benefits associated with participation, as presented in Appendix B), and scheduled a face-to-face individual meeting with the participant in a private setting convenient to the participant. At the beginning of the meeting, the participant completed the study consent form (Appendix B) and short demographic questionnaire (Appendix C). Once all documentation was completed, the doctoral student administered a modified version of the McAdams (2008) Life Story Interview (Appendix D), similar to Pals' (2006c) methodology. This included a description of life chapters identified by the subject; low, high and turning points in the individual's life; what each of these points says about the individual; and an additional section on significant others. As directed by Adler et al. (2017) in their primer article for narrative researchers, narrative prompts listed above were selected based on "theoretical questions under examination" (p. 522).

The interview, of approximately 90 minutes, was administered in the English language, audiotaped and later transcribed along with associated memos (personal insights, observations etc.). Life Stories ranged from 6524 to 12 197 words.

Data Analysis

Pals' (2006c) narrative methodology was applied to analyze the participants' life story narratives. More specifically, causal connections were used as a methodological-tool for the analysis of self-making within the life story.

In Phase I, the doctoral student, as well as one of the student's supervisors, independently read life-story transcripts to code causal connections. The second supervisor then reviewed identified causal connections and discussions were held to resolve discrepancies. In Phase II, characteristics of each causal connection were coded by the doctoral student and then verified by the two supervisors. Exchanges followed anew to resolve discrepancies. In Phase III, patterns of self-making that emerged across multiple causal connections, within each subject's life story, were identified by the doctoral student. More specifically, the information coded from each individual causal connection in the second phase was used to analyze how the different connections inform each other and create patterns of narration that either consolidate or transform aspects of self. The presence/absence of the different elements of the two-step narrative processing of growth identified by Pals (Table 1) were coded.

Table 1

Two step narrative identity processing within the Life Story

Step One: Exploratory Narrative Processing	Step Two: Positive Resolution
A. Negative events appear in the Life Story • That are emotionally threatening • Pose a direct threat to the coherence of self (to self continuity).	D. Transformation of the self occurs. • Resolution is achieved through transformation of the negative experience into a positive impact on the self.
B. Narrator acknowledges the negative experience in his Life Story: • Negative event impact is connected to the self through causal connections.	E. The story is coherent: • A structured narrative is in place with temporal sequencing, causal connections leading to identity and meaning making.
C. The participant is active in analyzing the impact of the negative experience within causal connections: • New self-event links are made • New self-making patterns appear as a result of active engagement of narrator with the negative event and its impact on self.	F. The growth that occurs is multi-facetted and mature. Results in: • Generativity • Ego development • Positive personality changes.

Pals (2006c)

Identification of patterns of narration also included coding for the presence of four narrative themes: agency, communion, redemption and contamination as defined by McAdams (2001). Agency refers to one's ability to exert influence over one's life rather than being subjected primarily to external forces and is related to the basic psychological need for autonomy identified by Deci and Ryan (2000). Communion refers to a second fundamental human need identified by Deci and Ryan: the need for social

connectedness. Redemption and contamination, on the other hand, refer to two possible trajectories following one's experience of adversity: stories that start bad but are followed by a positive ending (redemption), often involving the re-establishment of a feeling of competency or, alternatively, stories that start well but end badly (contamination; McAdams, 2001). In addition, the presence or absence of narrative coherence was coded. Waters & Fivush (2014) define narrative coherence in this way:

> For a narrative to be coherent, it must be told in a way that clearly delineates the temporal order of actions (chronology), it must orient the event in time and place (context), and it must provide enough detail and elaboration to link component actions together in a meaningful way (theme). (p. 442)

The two supervisors reviewed the narrative patterns identified by the doctoral student, across causal connections. Exchanges occurred to resolve discrepancies.

Perspective of the Main Researcher

The study's main researcher is a Caucasian woman in a doctoral program for practicing psychologists. A licensed clinical psychologist with over thirty years of clinical practice and a VAC employee for 15 years, the researcher has extensive experience in both PTSD treatment and mental health policy development. For the purpose of this study, a serious attempt was made to keep at a minimum all personal and professional beliefs and potential biases. All efforts to remain open to novel interpretations of the data were therefore made and were complemented by feedback from the student's two co-researchers/supervisors.

The following primary criteria were used to ensure valid research findings: credibility, authenticity, criticality and integrity (Whittemore, Chase, & Mandle, 2001). To ensure credibility, Phase I study data were independently coded by the doctoral student and a supervisor; and then verified by a second supervisor to resolve discrepancies. Phase II and III study data were also coded by the doctoral student and then reviewed by the two supervisors. To ensure authenticity, the primary researcher remained attentive to possible researcher influence on the subject's ability to speak authentically (Whittemore et al., 2001), making sure, for instance, to remain in her researcher role rather than wearing her therapist hat. To ensure criticality and integrity, possible study bias was explored and alternative hypotheses and negative instances were generated in multiple exchanges held between the doctoral student and her two supervisors (Deslauriers & Kérisit, 1997). Finally, to ensure integrity, present study findings are limited to the male Canadian Veteran peer support worker population studied (Whittemore et al., 2001).

Secondary criteria were also respected to ensure valid research findings (Whittemore et al., 2001). Thoroughness, in the form of a step-by-step description of the study's methodology and the preservation of all study documentation, facilitates study replication. Congruence between the research question, data collection and method of analysis; between current and past study findings; and between findings and practice (Whittemore et al., 2001) has been ensured by adopting a scientifically recognized narrative methodology to study the subject of personal growth and by integrating present

study results with the current scientific literature on PTG. Sensitivity and ethical behavior were ensured by presenting potential risks to subjects regarding study participation, prior to the start of the interviews and by informing subjects of their right to either delay their interviews and/or withdraw from the study at any time. No participant chose however to delay or withdraw from the study. Finally, the doctoral student was very attentive to adverse effects during the interviews given the traumatic material addressed, reminding subjects of clinical resources available to them should they require these and offering her contact information at the end of the interview. Both the ethics committees of Université de Sherbrooke and of the Department of National Defence (DND) approved the research proposal. This information was shared verbally and in writing with participants prior to the administration of the Life Story Interview. Interview audios and study data will be preserved for five years in a locked filing cabinet in the primary researcher's office.

Results

In this study, a life story research methodology was adopted. This Section presents therefore a detailed summary of three Life Stories, as narrated by each veteran study participant during the Life Story Interviews. Note however that minor modifications were made to extraneous elements of the narratives and pseudonyms were utilized to preserve confidentiality. An analysis of each Life Story follows illustrating the participant's two-step narrative processing of the negative impact of traumatic events on the self, as per Pals' (2006c) model. A comparison of findings for each of the three study participants then appears in a last subsection.

John's Life Story: *"Each Event Took Some Little Part of My Armour"*

Chapters in John's Life Story. When asked to think of his life as a book with several chapters, study participant one, John, originally refers to only two main life chapters: 1) before his last peacekeeping mission; and 2) during and after his last peacekeeping mission. As he narrates his story, John then decides to add a third life chapter on: 3) his peer support work.

Chapter 1: Before the last peacekeeping mission. John is succinct in narrating his life before his last mission. Addressing only his adult professional life, John describes himself as a quiet guy who loves his job in the CAF. His professional identity and life

are portrayed as positive and “beautiful” at this time. There are no problems. Everything is going well in his life and with his mental health.

Chapter 2: During and After the Last Peacekeeping Mission. During his last peacekeeping mission in mid-1990, John finds himself traveling all over the country where he is stationed. At one point he is sent into a city enclave to provide support to a Canadian Regiment posted in the region. Several incidents occur following his arrival. He and members of his team are directly fired at. He wonders whether he is being personally targeted but rationalizes that maybe all the antennas at his site are drawing attention. Following this incident, John is nervous when he leaves the command post. He becomes the subject of a running gag by his peers, who joke that everyone is okay when they leave the post except for John.

Once back in Canada, someone within the organization conducting a military inquiry informs John that, during his mission, the opposing army supposedly was offering a monetary award for “a bullet to your head”. Given the particular role he held in the CAF mission, it now made sense to John that he was personally targeted. As a result, John gained a better understanding of his fears during the mission.

Back in Canada, John remains however unwell. He restricts his family’s movements after dark. He loses friends. Still, he does not admit to himself what is happening. He returns to his unit and, one day, as he sits with some of his team, he comes across images of a military mission in a document. John experiences difficulty

with his breathing and starts to sweat. Someone next to him asks him if he is okay. John states that he probably has indigestion. John then views another page and breaks down. Everyone looks, wondering what is happening to John. He continues to "snowball". He says to himself: "Okay, I'm probably dying because, I don't know, probably something in my head is broken. I probably died." As he narrates his experience to the researcher he smirks, looking down at himself as the officer breaking down in front of his crew.

Disoriented, John is accompanied home and his wife is contacted. That night, he has nightmares. He asks himself what triggered his breakdown and why everything is "down". He desperately wants to understand. He sees his doctor and confides that the visual images in the document may have "triggered" him. He starts to sweat and feel unwell once again as he views pictures of preteens at a mission location. He realizes that he is reminded of his mission experience with local children.

Two local youth approached John and his fellow soldiers in the foreign city, yelling and throwing something. At first, John thinks it is a baseball but he quickly comes to realize otherwise and screams "grenade" to warn the others. John and his comrades immediately throw themselves to the ground, taking shelter. John finds himself on the floor next to the thrown grenade. It appears to be dead but he is unsure of this. Wanting to protect civilians nearby, John considers throwing his body on top of the greanade. He then tells himself to instead remove the pins to deactivate the grenade. He

recalls however that his hands wouldn't "cooperate with my mind". An intense inner struggle ensues before John finally succeeds to grab the grenade and remove the pins.

Sometime later, John is confronted by another group of preteens once again screaming "grenade". John panics and reaches for his gun, thinking he may need it. He is however reminded of his own three children. He considers pulling the kid with the grenade towards him instead in an effort to save the youth but freezes. He realizes he is in shock. He experiences tunnel vision. Everything is now moving very slowly. The preteens eventually vanish amidst the locals and John realizes that, once again, he was played. Shaken to his core, John releases his tight grip on his gun.

Once back in Canada, John identifies the viewing of local kids in the military document as the start of his PTSD. During the deployment, he explains that he made light of mission events; "you know we made bad jokes about certain situations because it makes no sense. Sometimes it makes no sense", for instance, finding dead people and dogs lying on the ground in the small towns, crows encroaching on them. Ever since the document viewing, however, John stated that he started to feel "crazy", especially early in the spring when the snow starts to melt and the smell of the wet earth is in the air. Eventually however he obtained a better understanding of what was actually going on and reports now being triggered less often.

John explains that the stigma in the Canadian military around the PTSD diagnosis was high in the 1990's. People didn't understand and appropriate mental health services were not in place. Medication and "Rambo style, toughen it up" interventions were, in his opinion, strongly relied on. For instance, John relates how, one day, after having spoken about his psychological symptoms, his superior confronted him, telling him that he didn't want "a faggot" in his unit. John recognizes that his commander may have been trying to help but he had instead "the opposite effect".

Following the disturbing interaction with his superior, John picked up his three young ones from school, fed them a snack and put a movie on for the children. He then went to the garage, unlocked his weapon locker, pulled out his pistol, and loaded it. He explains that he did not want to die but he was tired of it all. Just then, his eldest daughter walked in for a homework signature. This snapped John out of his suicidal state. He called his wife realizing that he was in serious need of help. He consulted a medical professional and was prescribed medication. John says however that he needed something different. He needed most of all to understand. Were it not for his daughter, he said he would have died. This being said, John states that he did not regret participating in the military mission. He considers he was also able to do good, helping civilians by providing meals and building a school.

Chapter 3: Peer Support Work. John adds a third chapter to his Life Story in which he elaborates on the good he was also able to do in his life when he started to

engage in peer support work. He hesitated at first telling himself that he was finally stable and that he did not want to be triggered once again. But he decided to give it a try and years later, here he was, still offering peer support. He describes this experience as being good but also "triggering" at times. He expressed feeling honoured by the trust his peers placed in him but he also learned that he had to set strict limits in what he allowed peers to share with him about their traumatic experiences. He was concerned about bringing their stories home with him.

High Point. John identifies help-seeking as the high point in his Life Story. He considers that his action started a "wave" of surprise in his unit, given his leadership position, but it also had the positive effect. He believes it incites others to seek help as well. Accessing help was important to John, he says, given what he put his family through. He felt he needed more help however than what his unit originally provided to him. He also stated that he did not understand why, after the huge financial investment in his training, the military now wanted to cast him aside simply because he was sick.

John's opportunity to engage in peer support work was therefore a prize for him, offering him the opportunity to tell and use his story to help others. He felt he succeeded, with his peer support function, in contributing to a change in mentality in the Canadian army as concerns military PTSD. He was able to help address the stigma around this subject by openly declaring his own PTSD to peers who came to him revealing their trauma symptoms.

John narrates that he would listen and offer support but then also challenged his peers: “but now what?” He explains that he moved ahead despite his psychiatric condition and encouraged his peers to do the same. John also taught discernment, teaching his peers that not everything in their lives was due to the PTSD. He believes that “if somebody stays with his bad story, he doesn’t advance. He stays […] stuck […] grab his pills and that’s it.”

John expressed pride in his newfound ability to talk about his story, and to move on, effectively using this story to contribute to the establishment of a new mentality within the military as concerns mental illness in soldiers and improved access to mental health services. He claims: “okay if something bad happened to me, if this is happening, it is for a reason.” At the same time, he acknowledges that, to this day, he does not have a full understanding of the reason for his psychiatric illness. He contends that “Maybe it is for another life.”

*What his high point says about him as a person or about his life***.** John believes he gained strength over time, post his traumatic experience, but states that he still has, to this day, bad moments. He describes for instance, anniversary reactions characterized by sadness and nightmares. John knows that PTSD is now a part of him but he doesn’t want the condition to continue to have this hold on him. He admits continuing to feel vulnerable and, more specifically, identifies a fear of becoming highly symptomatic

anew. He consoles himself by reminding himself that he can always get some additional help if needs be and states that he is no longer shy to ask for this help.

Low Point. Seeing and hearing children cry today reminds John of the children he came across during his last mission. He tells, for instance, the story of how, in an effort to obstruct the U.N vehicle John was driving, one day during the mission, a warring faction planted two young children directly onto his path. Today, he is reminded of this painful experience every time he hears children crying. Witnessing his children bickering also triggered John when they were younger. He describes becoming agitated, sweaty and angry during these squabbles.

John then drifts into another story. While at a public family event one day, he remembers becoming suspicious of an event participant. Falsely assuming that the man was carrying a grenade in his pocket, John abruptly yanked his youngest child out of the venue tent, unintentionally hurting him and making him cry in the process. His wife came to the rescue, intervening to calm both John and the child. John admits remaining vulnerable in this way to this day, becoming fearful and triggered in public spaces, especially when fatigued due to lack of sleep. He does not however attribute all his suffering to his PTSD. He alludes briefly to the existence of a personal "darkness". He does not however elaborate.

John ends the low point section of the Life Story by specifying that seeing and hearing children crying takes him to his darkest place: his suicide attempt. He states feeling very disappointed in himself for acting in this way in front of his child.

*What his low point says about him as a person or about his life***.** John sees himself as someone who came very close to losing a lot (his marriage; seeing his children go to university) due to a difficult life moment.

Turning Point. The moment his young girl came into the basement, just as John was considering taking his life, serves as the turning point and wake-up call for John. He realized, at this moment, what he was doing to his family and their great importance to him. Nothing else, he states, counted moving forward. John changed his mentality, letting go of his fear of asking for help, re-aligning his priorities and life focus. Dialogue at the supper table became important following this life crisis and, when his boy came forward saying that he did not want his father to go to another mission, John listened. He consulted the other members of his family and made the decision to voluntarily release from the military.

Significant Persons in his Life. The most important persons in John's life are his wife and his children. John states that he would not be here today were it not for his wife sticking by him through all the difficult years, his daughter walking in on him as he was about to take his life, and his other children telling him that they did not want John

to go on another mission. He feels he made the right choice of life partner. He doesn't even want to imagine his life without his wife and his children. He explains that a couple of years ago he came close to losing a family member to illness. That is why he has now decided to move on from his peer support work as well. John feels he has made his mark and that it is time to move on. He admits feeling that his "armour" has become "very soft now" but states that some of this may also be due to aging.

Through his peer support work, John learned of fellow veteran peers who lost their lives to suicide and states "that each event took some little part of my armour." He says he did his best to help soldiers impacted by PTSD, adding that "I am not tired about this, but I did my job, I did my job and I am okay with that now. I am at peace."

Illustration of John's Identity-Making Narrative Processing

Step One: Exploratory Narrative Processing.

Traumatic Experiences Reported in John's Life Story Leading to Ensuing Threats to the Self. John addresses, in his Life Story, several mission-related traumatic incidents that posed a direct threat to his self-continuity (Table 2). The types of threats to the self, experienced by John, are then listed in Table 3. The most important threat to the self, acknowledged by John, is his concern for his emotional stability.

Table 2

Traumatic experiences reported by John

- In the village enclave, a preteen throws a hand grenade directly at John and his fellow soldiers.
- A short time later, a second hand grenade is thrown.
- Rebel army place young children directly in his path in an effort to stop the U.N. vehicle John was driving.
- Exposure to decaying dead bodies on the streets.
- Back in Canada, John is psychologically unwell and makes a near suicide attempt.

Degree of Acknowledgement of Traumatic Experiences and of their Impact on the Self. John's first causal connection in the Life Story appears as he recounts learning, upon his return to Canada from his last mission, that he may have been personally targeted during his last deployment. He acknowledges at this time his fearful self and links this to mission events: "Now I know why each time I go outside the wires, a lot of things happen to me." Attempts to normalize his fear reaction and to assimilate events within his existing identity as a strong military leader however fail. John recalls his team's jokes "It is a running gag at this time. When officer John goes outside, okay, everybody is okay except for John."

In his narrative, John mocks himself for his freeze reaction during his last deployment and admits to being concerned at the time about how he was being perceived as a military leader. He also mocks himself for being too fearful, once back home, to allow his family outdoors after dark.

Table 3

Nature of the Threats Posed to the Self: John

Sense of Safety

- Felt personally targeted during deployment.
- Fearful when beyond the confines of the army compound.
- Back in Canada, forbids family from going out after dark.
- Suspicious of others when in public spaces.
- Near suicide renders him fearful for his life and all that he stood to lose.

Professional Identity as a Military Leader

- Fear when leaving the army compound causes John to become the butt of jokes by his subordinates and peers. Starts to worry about how he is being perceived.
- Worry exacerbates when John has a panic attack in front of his subordinates.
- Commanding officer tells him that he does not want a "faggot" in his unit.
- Mental illness poses a threat to professional identity when no longer deployable.

Mental Health

- Exhibits symptoms of PTSD in the form of nightmares, a fear of public spaces, intrusive memories and olfactory flashbacks in the spring post-event.
- Fears becoming "crazy".
- Obtains a better understanding of his mental health symptoms over time, but concern for his mental health persists throughout the Life Story.

Intimate Relationships

- John's compromised mental state leads to loss of friends and family stress.
- Family negatively impacted when John comes close to taking his life.

Sense of Belonging

- Feels abandoned by military; let go when he becomes ill.

Worldview

- Following his last mission, John comes to feel that the world is unsafe.
- Core assumptions in regards to the protection of children tested when local youths are involved in the civilian conflict.

Values

- Struggle to determine right course when confronted with child aggressors.
- Realizes that he has strayed from his values when daughter walks in during his suicide act.

He recognizes now, in recounting his story, that his curfew rule was unreasonable, but recalls fighting, at the time, to maintain continuity and normalcy in his self-identity as a military leader:

> But I don't realize at this time, and my wife don't […], tries to say to me but, I don't realize at this time. But I think I don't want to realize at this time, because sometimes I realize: okay I'm no good but, I'm the boss and the officer [*laugh*] but nobody go outside after darkness, nobody go to [*name of store*] because it's too much people.

John therefore makes a causal connection between his strange behaviour and being unwell but wards off full acknowledgement of this reality. He also initially continues to deny that something is wrong with him despite the progressive loss of contact with all his friends. Finally, John recounts that when he broke down in front of his team, he minimized his experience again, convincing himself that he simply had indigestion. Recalling the event, John exhibits disdain towards himself anew:

> I melt down. I start crying. I panic. I panic. I start to cry more and I'm the combat officer [...]. It's very promising! Everybody starts looking at me. Okay what's happening with John now?

The breakdown, John recounts, led him to feel "broken in my head".

Degree of Analysis of the Impact of the Negative Experience within Causal Connections to Form New Links and Patterns Within the Self. The intense triggering of PTSD symptoms, during and following his first viewing of the military images, leads John to develop a strong motivation to better understand what is going on with him. He asks: "What's the trigger for this? I don't understand [...] Why I start to cry? Why everything is down? [...] I don't understand!" John progresses from passive denial and

minimization of his symptoms to more active exploratory openness. He begins to engage in and exhibits personal agency when he consults his military base doctor and when he pushes himself into viewing the document images anew. He learns that day that he has PTSD and unfortunately then engages in some negative accommodation, characterizing himself as “very stupid” for the way he handled the situation with the grenade-throwing teenager.

Knowing that he has PTSD however now also allows John to understand himself better. For instance, whereas John used to attribute his early spring nausea, sadness and nightmares post deployment to having become “crazy”, today John recognizes that, in fact, the smell of the wet earth in early spring triggers in him an olfactory memory of the dead corpses lying in the village streets during his last mission. As well, John now acknowledges the intense feelings of sadness, anger and aggression awakened in him to this day when he hears children crying. He is reminded of how local children were used as a blockade durnig the mission:

> My lowest point is the children who are crying because I am not able to hear this because […] the situation, […], the rebels, they stop the U.N. vehicle...

He recalls how the bickering of his own children when younger triggered and agitated him, resulting in a fear of losing control:

> I start sweating, I become angry and no, no, no, […] I said one time, that’s enough guys! I am not a young guy […] I go outside because I know I can probably do some bad things and I don’t want to do this anymore.

John makes therefore important causal connections in the Life Story: children crying leads to mission reminders which leads to agitation; the agitation leads to a fear of losing control which then leads John to feel like a dangerous person. This fear of losing control is then also manifested in public situations, such as when John became suspicious and fearful of a strange-looking man at an outdoor family event: "But I am not dangerous but sometimes when I realize that I am tired, or I had a bad dream or, I don't know." John expands recognizing an inner "darkness" within him:

> Yeah it's a PTSD but it is not necessarily the PTSD. I don't want to put everything on this. It's not true. It's my darkness […] I hear some kids, the kids crying and my fear is: okay, if you don't stop that immediately I go to the low point! My low point for me is; it's my suicide attempt.

He elaborates a little therefore in regards to his darkness and makes a self-event connection between his superior's derogatory remarks and his ensuing suicidality. John does not, however, elaborate as to what in the commanding officer's inappropriate words led him immediately to the very brink of suicide.

John does acknowledge that his behaviour was impulsive and that, actually, he did not really want to die, He links his suicidal gesture simply to extreme fatigue and a wish to end his suffering. A new self-event connection then follows in the Life Story Interview in which John identifies a feeling of profound disappointment in himself and guilt following his near suicide attempt for what he put his daughter through: "I am very disappointed […] to do this suicide attempt in front of my kid. It's my, my low point is this."

A certain narrative sequence is followed in the Life Story. At first, John resists acknowledging the negative impact of traumatic life events on his self, attempting instead to assimilate the new information into his existing identity as a strong military leader. When this fails, he resorts to negative accommodation in which he starts to think of himself as incompetent, as "crazy" and as letting his family down. He feels shame. The themes of contamination, communion loss and stress predominate therefore early in the Life Story narrative. The severity of his PTSD symptoms then forces John to confront the reality of his mentally ill self. Gradually, John moves from passive denial and minimization to taking an interest in obtaining a better understanding of his suffering. This especially occurs following his near suicide attempt.

Step Two: Coherent Positive Resolution.

Degree of Resolution and Integration Achieved in the Life Story. By acknowledging his suicidal acting out and connecting the negative impact of this experience to his self through causal connections, the possibility for change arises. A positive paradigmatic shift occurs in that John comes to recognize, following his suicidality, the error of his ways and the positive, primal importance of his family to his life. In the Significant Others Section of the Life Story Interview, John specifies how he became very motivated to become a better family man following the near suicide attempt. This includes seeking additional help for his mental health condition.

According to John, by opening up on his negative experiences with mental illness, he helped others come forward as well, creating awareness and contributing in influencing the establishment of more mental health services for CAF men and women impacted by military PTSD. John identifies this as the high point in his Life Story. Causal connections are now made in the narrative in which negative events have a positive impact on John's sense of self. John describes a courageous third chapter in which he becomes empowered through his peer support work, develops a new sense of purpose, and begins to feel once again accomplished. John recounts the following: "I used my story to try to change something. I used my story to help somebody […] look at me now!"

There is therefore positive resolution in John's Life Story. However this positive resolution remains incomplete given that John also refers in his narrative to continued very strong feelings of vulnerability. He identifies a need to set strong boundaries with his peers not allowing them to share their traumatic stories with him given that he was being too easily triggered. John states: "when I receive bad news or when I am tired or when the anniversary date has come, I know, [the PTSD] it's inside me." Recognizing his fragility, John tries to comfort himself by claiming:

> But I know now. I know it's that […]. I don't want to go there another time. If I go there another time, okay […] I ask for help and I am not shy to ask for more help.

The peer support high point in John's Life Story is therefore also somewhat tainted by the lasting negative impact of life events on his mental health. The theme of

contamination remains throughout the Life Story narrative as John acquiesces to the reality of his psychological fragility. Some negative accommodation occurs. John is very honest, acknowledging that his "armour" is down. He determines that he has given what he had to give, and that this is enough. He actively takes care of himself by choosing to withdraw from peer support work after some years of contribution. He claims that he is ready to start another chapter in his life. He recounts:

> I know each event took some little part of my armour. And this part won't come back because, […] I did my job and I am okay with that now. […] I close the door on the city [enclave], and everything. It's in my past.

John attempts therefore to close the door not only on his peer support work but also on his traumatic experiences and their negative impact on the self. Positive resolution of his traumatic past is however not obtained. Many years after the traumatic mission events, John acknowledges still not fully comprehending the meaning of his traumatic experiences. He leaves any further analyses to another life: "Okay if something bad happened to me, if this is happening, it is for a reason. I don't know the reason now. Maybe it is for another life. "

Coherence in the Life Story. John's narrative is well structured but he omits to mention several periods of his life. John divides his Life Story by describing a before and after: his life before and after his traumatic military experiences. A third chapter on his peer support work is later added. In the "before" scenario, John makes no reference to normative life stages outside of his military life, such as graduation and marriage, or his formative years as a child. John's life prior to his last deployment is described

succinctly as “all good”. He states that “Everything is beautiful at this time and no problem, no psychiatric problem, no PTSD. Everything is going fine and is going well.” He makes no causal connections in the Life Story narrative when describing this “before” period of his life.

Several inconsistencies are also present in the narrative, such as when John expresses a belief that life difficulties originate in childhood but does not go on to refer to his own childhood in his life narrative. He recounts:

> And I know the doctor wants to do, wants to do the best for us but when you give some pills because you’re an agoraphobic, you may be agoraphobic, you may be agoraphobic or your mother loved you too much.

Also, John is somewhat inconsistent when he states that some of his issues are for another life while also emphasizing that: “if somebody stays with his bad story, he doesn’t advance [...] Grab his pills and that’s it.” Finally, John refers to the importance of psychotherapeutic help in his narrative but he reports having completed only six therapy sessions throughout the years despite an “inner darkness” that scares him. Despite these inconsistencies in the narrative, three of the four characteristics of global coherence in life stories, described by Habermas and Bluck (2000), appear in John’s Life Story narrative (Table 4).

Quality of Growth. John demonstrates growth in his Life Story that goes beyond achievement-related agency to also include generativity, and increased meaning and purpose in life. John’s strong desire to understand and overcome his symptoms, to use

his illness to help others and to repair vis-à-vis his family serves as a prime motivator in his effort to heal, eventually leading to growth through action in the form of peer support work and dedication to family. He establishes a new positive identity as a peer support worker and strengthens his identity as a family man.

Coherence in the Life Story: John

Temporal Coherence	• Linear chronological order is present. • At times, the chronology appears as temporal re-alignments in the form of flashbacks.
Cultural Concept of Biography	• The Life Story is not organized based on events normatively used as temporal landmark events. • High centrality of event appears: impact of the mission-related traumatic experiences on the self predominates in the life narrative.
Causal Coherence	• Autobiographical coherence is partially present. Few causal connections made between different life stage events.
Thematic Coherence	• The storyline and an evaluative trajectory are present in which meaning is observed post-traumatic events: participant succeeded in utilizing his negative traumatic experiences to be of service to others also impacted by PTSD. • Some inconsistencies however appear in the Life Story content.

John's growth remains however limited in that his narrated story ends in the midst of ongoing negative emotions and conflicting feelings. There is an attempt at closure but it is not entirely successful. The Life Story is organized around his traumatized self. There is high centrality of event. Descriptions of sensorial PTSD symptoms, emotional

triggers reminding him of his near suicide attempt, the children in the foreign city, and important feelings of vulnerability predominate. Growth in the following domains of PTG: increased personal strength, changed priorities, more intimate family relationships and new possibilities appear nonetheless in the narrative. Meaning-made and the re-establishment of a positive sense of self over time is however only partially obtained.

Sam's Life Story: *"Continuing to Wear My Medals on My Chest"*

Summary of Sam's Life Story. The second study participant, Sam, breaks his Life Story into three life chapters: 1) Upbringing; 2) Military Career; and 3) Peer Support Work.

Chapter 1: Upbringing. Sam describes himself as "the child of a soldier." That is, his military father raised him applying a structured, "military style" childrearing approach. He was a positive role model to his son. Particularly impressive to Sam was how quickly his father rose within the military ranks. After over 25 years of military service, Sam's father then also excelled as a civilian, assuming a leadership role in a large non-military organization.

Chapter 2: Military Career. Sam proudly states that he also had over 25 years in the military. He began his career directly in the infantry, bypassing boot camp due to the recruitment need at the time. He completed 22 weeks of intensive training and was then assigned to an infantry battalion. Sam recounts that the training was difficult but also rewarding given a special opportunity to be embedded within a 40 men infantry platoon.

Upon completing the training, Sam therefore enlisted. He was assigned to a new battalion, met a girl, married and was sent overseas. After two years of "interesting" overseas service, Sam states that he then requested a posting in Canada, given his young wife's physical ailments requiring treatment on Canadian soil. A next deployment overseas followed a couple of years later.

Sam describes his second mission as "atypical" given its stark contrast to both the harsher contemporary tours of his peers and his assumption as to the public's perception of Canadian deployments. He recounts that, in recognition of his education and intelligence (he had skipped a grade), his superiors assigned him to run a retail store for the military at his mission location. The working conditions were great. Sam worked mornings and had afternoons to himself, which he used to "drive down to the beach." At the time, he recounts, "My biggest concern was if the air conditioner worked so the chocolate didn't melt and the booze was cold." The experience was for Sam "literally, quite a holiday!"

In the 1990's, the political context however changed and Canada became involved in several highly challenging peacekeeping missions. Sam learned that he was to be deployed on one of these missions. He got wind from a distance, from another Canadian battalion already on site, of the tense situation on the ground. He however did not relate to the situation. Sam explains that, conceptually, at the time, his only reference point was his own previous "easy" deployment experience. Three weeks prior to his

deployment, a small advance party from his platoon left on tour. There were mine strikes and some military personnel died. This was still however only a preliminary eye opener. As Sam recounts: “we never really got a feel for what it was like, until we hit the ground.” Once on location, Sam then discovered “a war zone”:

> So if you can imagine now, you’ve probably seen it on TV, what it was like to drive through a war zone where buildings are completely wiped out. And, that, conceptually for all of us was: “Woah, I have never been in this before!”

The experience served as an important turning point for Sam, especially given the “uneventful” first 12 years of his military career. In his Life Story narrative, he explains the dangerousness of the mission, specifying that the region was a largely mined area in at the time, with improvised explosive devices (IED) but also with more potent explosive Russian mines. Designed to take out tanks, the Russian mines, Sam elaborates, were far more potent than the IED, a distinction that he believes is not clearly understood by the general public. It was commonplace for these mines to strike. The platoon quickly got to work clearing routes, their motivation to make a difference high at first until, Sam recounts, “complacency” set in.

In the early days, given that the two-kilometre zone of separation between the two opposing forces was not yet in place, Sam’s platoon was involved in a few skirmishes. Later, a zone of separation was finally established but the situation remained nonetheless perilous given, as Sam recounts, the stuff that “falls inside” the zone of separation. The main pumping station supplying water to the valley, for instance, fell within the identified zone of separation. According to Sam, one of the warring forces

took full advantage of this situation, breaking off their enemy's water supply. As peacekeepers, Sam's team mitigated the situation by taking control of the water supply. However, they were met with strong opposition. Sam and his team discovered, to their great surprise, that the ethnic aggressor had more tanks at its disposal than the Canadian contingency.

Sam's platoon learned that they needed to assess risk carefully to avoid unnecessary escalations. They put together a team of 140 men. The warring ethnic group responded by surrounding the Canadian peacekeepers with civilian vehicles stacked with machine guns and buses loaded with 200 to 250 people. This placed Sam's team in a difficult situation, given the strict Rules of Engagement. To make matters worse, Sam recalls how cognisant the regional fighters were of the peacekeepers' Rules of Engagement, maliciously applying this knowledge to their full advantage. In the Life Story narrative, Sam reflects on the established Rules stating that, in a matter of speaking, there were no actual Rules of Engagement given that the Canadians were not allowed to retaliate by shooting. He remembers hearing, over the radio waves, the distress of individuals being detained by one of the regional forces and the feeling of powerlessness conveyed in their voices. Sam states: "You can hear on the radio, people were crying on the radio and it was, psychologically, it was very gripping. It was a worrisome period."

Sam then goes on to describe unfortunate suicide incidents during the mission. These occurred, Sam believes, in response to "Dear John" letters received. Sam and his

team “cleaned up” after the events. Sam describes the experience succinctly as “very weird.”

Sam states that he “encapsulated” the traumatic mission experience in his mind into two categories: THE killings and killing. The former, he explains, refers to all the exploitation and violations of civilians he witnessed during the mission. The warring factions, Sam recounts, would deliberately pull targeted individuals inside the zone of separation to “settle a score” within earshot of Canadian soldiers, knowing fully well that the latter could not intervene. The Canadian team would head out but by the time their patrol was underway, Sam explains, the violations had already taken place and there was nobody to intervene with. Sam describes the situation in his Life Story narrative using this one word: “creepy”.

Sam then elaborated on the complicated reality in the field in terms of engaging in killing. Back in Canada, he explains, the soldiers were heavily cautioned in regards to consequences if the mission’s Rules of Engagement were broken. One could “perhaps be faced with the laws of the land.” On the ground, these Rules of Engagement, however, proved difficult to respect. Sam recounts how the regional fighters would move the markers delineating the zone of separation, once the latter was established, in a deliberate effort to confound the peacekeepers. As such, early one morning, Sam and a corporal unintentionally found themselves within the zone of separation where they came into contact with a team of non-professional regional soldiers, temporarily

replacing their off duty professional counterparts. Sam felt that the stance of these ill-kept and non-disciplined soldiers was “off”. They smelled of marijuana and had clearly been drinking. The soldiers wanted to inspect Sam’s team vehicle and asked to see their military identification, although they were clearly not allowed to do so. Sam describes the situation becoming increasingly tense: “So we kind of went back and forth at which point it became evident that there was gonna be some harm to somebody and now, it was a matter of who is gonna get it.” Sam signalled to his driver that they needed to do something. At the same time, he made a mental note as to the importance of no shot being fired. An intense physical conflict ensued. The experience was extremely scary to Sam who remained cognisant of the strict rules of engagement to be respected at all cost.

The rest of the tour and the years following this tour were, in Sam’s opinion and generally speaking, uneventful except for his spouse’s death in the 1990’s. Sam however does not go on to narrate this traumatic part of his life until later, in the low point section of the Life Story Interview.

In the 2000’s, Sam then remarried and several years later his wife gave birth. Some time after Sam’s stint in an alcohol rehabilitation centre, the marriage dissolved, ending badly with Sam losing contact, to this day, with his progeny. During that time, Sam transferred to an occupational trade “because I didn’t feel I was in the state where I should be for […] the infantry.” When deployed anew, Sam therefore now engaged in what he describes as an “uneventful” deployment. He does recall being however

constantly “triggered” when driving in a “trapped vehicle” over the same roads travelled during his previous mission. The reliving of painful memories, during this tour, of previous mission experiences, made him crave revenge: “It triggered anger in the events that I was describing earlier. I was becoming volatile and essentially not communicating that to anybody and I probably could have been a liability at some point in that tour.” Sam however had the support of his third wife and this was tremendously helpful to him.

Upon his return to Canada, Sam remained symptomatic. His spouse recommended that Sam consult a mental health professional. Sam accepted and was reportedly diagnosed with “PTSD, acute symptoms of alcohol abuse, anger, aggression and withdrawal”. Meanwhile, Sam was being considered for another deployment. He was offered an impressive position but he turned it down, informing his superiors that he was in treatment. He accepted instead an administrative position in Canada that allowed him to continue his therapy. No longer eligible for deployment, Sam was eventually medically released from the military. He compares his military release experience to that of a professional football or baseball player who is turned away when injured.

Chapter 3: Post Military Career: Peer Support Work. During the last year of his military career, Sam then met a peer support worker and attended a couple of group meetings. The peer support experience, he describes, was illuminating. It allowed him to access “the part I was missing. It was the understanding or the empathy for people that have experienced.”

He became aware of how withdrawn he had become and found himself gravitating more and more towards peer support rather than psychotherapy, especially given that he was, in any case, on the way towards a military release. Sam started to run his own peer support groups and determined that he was an ideal candidate for peer support work. Given his status and accomplishments as a military man, Sam explains that, unlike others, he was spared the stigma surrounding mental illness present at the time within the military. He was confident that others, in his case, would not:

> Try to label me, try to do that stigma, try to say that you're weak. Nobody had anything on me. I had a series of medals coming off me like crazy, I'd been on several tours by then and nobody had anything on me.

Six months after starting to run groups, Sam then attended a peer support learning session and was further enlightened as to how peer support can complement therapy to effectively help soldiers suffering from PTSD. He eventually ran his own peer support groups and organized fishing trips with his peers. He noticed that group attendance was low despite the size of the military base where he was situated. He decided to work on breaking down the barriers that led to low group attendance. The solution, he thought, was for him to go to the source rather than wait for peers to come to him.

Sam held meetings with military command and was well received. A well-respected officer, who had a solid reputation for his service in Afghanistan, also started to attend his peer support groups. Soon more and more peers started to show up and new groups were formed. This awakened Sam to the power of his peer support work. He continued with psychotherapy but reportedly felt that his mental health improved more

as a result of active peer helping. To Sam, this was PTG in action. He gained a new positive lease and perspective on life and considered that he was becoming a better person as a result of his peer work, where he was able to be of help to others.

In his Life Story narrative, Sam recounts that peers often come to him at their worse. He assists them by letting them know that their PTSD is not a life sentence. He offers his peers the following perspective and analogy:

> Look you can be mad about the whole thing; about what happened, in your past, stuff like that [...] I want you to imagine you're driving a car and if you look in the rear-view mirror and if you look at the front windshield that's your future. And if you look in the rear-view mirror often enough, you will get mad, because of what's happened. You've lost your career, there is death, destruction, all kinds of stuff going on back there and that is what's giving you, you know, the negative experience, and that's your experience today. But if you look at the front windshield, at life and it's future, and what is possible, then you will have a better perspective on life.

High Point. When asked about the high point in his life, Sam then refers to the birth of his children. More specifically, Sam refers to his youngest child, a 10-year old at the time of the interview, who excelled in sports. Sam proudly describes the fourth grader, already on a Junior Varsity soccer team, the youngest in golf tournaments and on the volleyball team. Sam attributes his pride however not only to his child's performance in sports but also to the leadership she exhibited. Although Sam also considers himself a good leader, he perceives, in contrast, his 10-year old as "a great leader' and as "a potential future prime minister."

What his high point says about him as a person or about his life. Sam considers that his child is flourishing given the "proper environment" he and his wife are providing. He expressed, during the Life Story Interview, pride in regards to the couple's strong, positive parenting.

Low Point. Sam identifies the death of his first wife as the lowest point in his life. Sam was informed while on a military course of her medication-related death. He flew in to be with her and then discovered that his wife was not actually dead. He found her on life support in the intensive care unit of the university hospital. He immediately became concerned for his stepson, envisioning two equally horrendous outcomes for him. Either his teenage stepson would carry the burden of taking care of a mother in a permanent vegetative state or he would lose his mother at a young age. He stopped all visits from family and friends for the first five days. Later, he determined that it was appropriate to at least allow his teenage stepson to see his mom. Others then assumed that they would also be allowed to visit but Sam refused, wanting to avoid "a circus show." This refusal, Sam recounts, caused conflict between him, his stepson and others.

Sam had however an even more pressing matter to deal with at the time. A decision had to be made in regards to life support. Sam struggled to determine if he needed to involve his stepson in the decision. He finally made the decision on his own to remove his wife's life support and advised his stepson of this, explaining that, as his mom's husband and the adult in the family, it was ultimately his responsibility to make

the end of life decision. This, Sam explains, was the most difficult conversation of his life. However, after having made his decision, his wife's doctor intervened, deciding that he wanted keep Sam's wife alive for at least another two weeks. When no change occurred in his wife's health status within the following weeks, the end of life decision then had to be made all over again. Finally, however, Sam explains that his wife died naturally, after being transported back to the local area hospital from the university facility.

Following his wife's death, Sam explains that his stepson went through an "identity crisis". He had just lost his biological mother and had no contact with his biological father. As for Sam, he had been his stepfather since the age of five but the relationship was now tense. Finally, during what Sam refers to as "the most troubling period" of his life, his stepson went off to university. Today however, Sam reports that "the universe is right" again. Sam explains that over time he was successful in re-establishing a good relationship with his stepson. At the time of the Life Story Interview, the latter was married and had a child.

What his low point says about him as a person or about his life. Sam learned, during this stressful period, of his tenacity and ability to persevere despite very tough times. In Sam's words, it "tested the metal" he was made of.

Turning Point. Sam identifies several turning points in his life but he considers joining the peer support program and, more specifically, "receiving the education, the knowledge and putting it into practice" as his most important turning point. Sam considers that his peer support training and work led to a personal change in him. He went, in his opinion, from being "an astute, solemn alcohol abuser to being open, positive and a good example for those with mental health issues." He established a new perspective, determining how and why it is important to remain positive in life. As an example of his success, Sam recounts the story of a peer who needed to be hospitalized after experiencing an emotional breakdown. Sam helped the couple throughout the crisis period, visiting daily at the hospital and following discharge. He assisted both the peer and his wife with accessing mental health services. As a result, today the couple is doing very well. Sam considers that he was proactive and positive in his efforts. He learned through this experience that a positive outcome is possible for soldiers with PTSD and their families, and that he can contribute to creating this positive difference in their lives.

Significant Persons in his Life. Sam considers that there have been several significant persons in his life. He names his father first and expresses how proud he is of him for all that he has accomplished in his life. Sam values military service and considers that his father is a person who has had a very longstanding, successful military career, followed by a successful civilian career. Sam considers that he inherited positive personality traits from his father such as being "a logical and critical thinker who thinks before he speaks."

Sam also has fond memories of a military Captain under whom he served and whose leadership style he greatly admired. The former taught Sam that when problems arose, his task was to come to his superior with a proposed solution rather than with the problem. His superior therefore gave Sam the latitude to think things through independently, to experiment and to then report back. This had a positive influence on him. Finally, Sam identifies his spouse as a very significant person in his life. He describes having the utmost respect for his wife, whom he explains has experienced a lot of early adversity as well as significant later-life challenges. Yet, he says, she did not fall to her knees. Sam recounts that he is envious of his wife's resiliency and considers that she is someone to be revered. Today, she is a great mother to their child.

Illustration of Sam's Identity-Making Narrative Processing

Step One: Exploratory Narrative Processing.

Traumatic Experiences Reported in Sam's Life Story Narrative Leading to Ensuing Threats to the Self. Table 5 presents traumatic incidents reported by Sam. Traumatic experiences pose several threats to the self. These are presented in Table 6.

Table 5

Traumatic experiences: Sam

- Death of first wife; end of life decision.
- Exposed to landmines during mission.
- Witnessing of atrocities over the radio.
- Serious fight with warring faction with fear of breaking the Rules of Engagement.
- Tasked to "pickup" following suicide of peers during mission.

The most important threat to the self for Sam appears to occur when he accidentally crosses the zone of separation while on mission and finds himself in a dangerous intense physical fight with an ethnic warring faction. Sam recounts as well many experiences of powerless witnessing from a distance of atrocities committed against innocent civilians but this event, he says, stood out for him for the most. In the Life Story narrative, Sam makes a distinction between what he refers to as THE killing by warring aggressors of the innocent through horrendous acts of violation, and a feared near killing that occurred during Sam's intense fight. He relates becoming very afraid during this particular mission event of inadvertently breaking the established Rules of Engagement and having to subsequently face the laws of the land and of the Canadian military. Sam narrates becoming increasingly emotionally volatile at the time of, and following this traumatic incident.

Degree of Acknowledgement of the Traumatic Experiences and of their Impact on the Self. Sam begins his Life Story by forming several causal connections that describe what led him to become a military man. For instance, Sam's first causal connection links his character formation to his military upbringing. He recounts: " So that is kinda my upbringing, was very military structured, very good understanding of the military and I was built." This is quickly followed by a second causal link in which Sam describes his first infantry platoon experience and how this led to the discovery of his rightful place within the infantry:

Table 6

Nature of the Threats Posed to the Self: Sam

Sense of Safety

- Presence of IEDs and Russian mines during peacekeeping missions posed a threat to life.
- Contentious physical fight with a belligerent warring ethnic group.

Professional Identity as a Military Leader

- Professional identity and sense of competency as a soldier threatened when unable to intervene, given complicated Rules of Engagement.
- As well given that ensuing mental illness rendered participant no longer eligible for deployment.

Mental Health

- Threat to mental health acknowledged. Worried about becoming a "liability" during mission.

Intimate Relationships

- Sudden loss of first wife to death and subsequent strained relationship with stepson.
- Tumultuous second marriage and divorce; loss of contact with progeny.
- Loss of military members prior to the start of his third tour.
- Loss of peers during tour.
- Becomes socially withdrawn following mission-related traumatic experiences.

View of Self

- Shattering of sense of the self as a soldier given inability to protect the vulnerable.

Sense of Belonging

- When intense physical fight with a rebel group breaks out, fears arise of inadvertently breaking established Rules of Engagement and having to face consequences.
- Feels kicked out of the "team" when he becomes ill.

Worldview

- Core assumptions in regards to acceptable human behaviors.

> I think as an incentive to try to get us to continue, they sent us to […] on a Platoon exchange or a 40 men exchange. So that worked, I guess, in my case. I did sign up to the right force at that time.

Finally, in a third causal connection, Sam describes being chosen by his superiors to run a store for the CAF military overseas given his education and intelligence and the positive impact this experience had on his self-esteem.

The "easy" mission experience however then becomes negatively causally linked to a feeling of unpreparedness when a significantly more difficult mission comes up. More negative causal connections then follow in the narrative as Sam learns of mine strikes and the loss of military persons on the same tour he is about to embark on. The news has a negative impact, causing him to feel apprehensive. He narrates the following: "So we had a few mined strikes, there where people were manned. People were dead and stuff like that. So we kinda got it before we hit the ground, we were already getting it."

The negative turning point in Sam's military life arose however only once he became directly exposed to the situation on ground. Whereas his military upbringing and his previous 12 years in the military are described as positive and empowering, Sam is now confronted to a new reality that feels surreal to him, overwhelming and very confusing. He causally connects, in the Life Story narrative, this peacekeeping mission to a shift in his mindset:

> So, now it was reality […] You're actually gonna end, you are gonna go to sleep in that, you're gonna wake up in that the next day or you're gonna patrol in that. So it was kinda like: ok, now it's on!

At first, Sam attempts to assimilate the experience within his existing identity as a competent soldier. A positive causal link therefore appears in the Life Story in which Sam describes at first responding to the adverse situation by becoming even more determined, like his peers, to make a positive difference as a peacekeeper. However, preceding this positive causal link is also a reference to Sam and his team's eventual loss of resolve:

> So we did a few cleared routes. Like almost when you hit the ground, you're kind of, they actually have a pattern for tours […]. In the end, there's complacency and see, but in the end. First, there's you know, at first you wanna get out there and you want to do it.

A series of additional powerful negative causal connections then also appear in the Life Story as Sam acknowledges the "eerie" and "psychologically gripping" impact of hearing captured civilians crying over the radio. The inability to intervene leads to negative accommodation as Sam's previous positive worldview of Canadian peacekeepers is replaced by a feeling of ineffectiveness which he expresses in his narrative in this way: "It was very confusing for all of us, that essentially you're a combat force that had no control whatsoever. You know what I mean, that's really what was going on."

The feeling of ineffectiveness is however attributed primarily to the forces, not to himself. The loss of peers during the mission and the picking up of their remains are then negatively causally linked to a growing feeling of "weirdness".

Sam then elaborates on how he felt provoked by the ethnic warring force that, reportedly, maliciously engaged in gratuitous acts of violence, in the zone of separation, within deliberate earshot of the Canadian peacekeepers. In his narration, Sam causally links the provocation with the increasing aggressive posture he adopted during his third mission: “So there were [what appeared to be] rapes, screaming, shootings, executions, everything going on inside […] until we became more aggressive in our stance.” At this time, in his narration, Sam acknowledges his increased aggressive stance and negatively causally connects it to a growing fear of resorting to actual killing. This, in turn, is causally linked to a fear of inadvertently breaking the strict mission Rules of Engagement and of having to face the subsequence of the offence, although the latter is not explicitly stated in the narrative.

After his return to Canada, Sam realizes that he is unwell. In his Life Story, he causally links the recognition of his compromised mental health to a personal decision and readiness to leave the infantry. When deployed anew, this time in a trade rather than an infantry position, Sam however finds himself nonetheless driving on roads similar to the ones covered during his last mission. He causally links this experience to the triggering of bad memories from his previous tour, which he says led him to now want “payback”. Yet more negative causal connections follow as Sam recounts becoming increasingly emotionally volatile and withdrawn due to the PTSD triggers, to the point where he started to feel more and more a “liability”. His third wife was however a welcome positive experience. Sam causally links his ability to stay out of serious trouble

during his last mission to her calming influence. Interestingly, however, when Sam started his narration on the subject of his last mission, he described it as “uneventful”!

Help-seeking once back home is also attributed to Sam’s wife. A diagnosis of chronic PTSD then eventually leads to Sam’s medical release from the military, which he negatively causally links to a feeling of no longer being good enough for the team.

> But, in my opinion, the military mental health service it’s designed like a professional hockey team, so my analogy is like pro football, hockey, baseball, I don’t care whatever you call it. So everybody goes to camp at beginning of the year, pre-season and you do tryouts and sooner or later the season has got to start. Right so the season starts, everyone starts going on exercise pre-deployment training, blablabla. You made the playoffs now you’re deploying. If you can’t deploy, you’re not gonna make the team. At which point they say thanks for coming out, here is your release. That’s what happened to me.

The theme of agency therefore dominates early on in Sam’s Life Story but then gets replaced by contamination in mid-career. Sam eventually acknowledges negative mission events and their impact on his self. He describes a loss of agency, the loss of his positive identity as a competent military leader and a loss of a sense of belonging to the military family; a life that he greatly valued, that defined him and to which his father, whom he idealized, had also belonged to and excelled in. Later, however, Sam discovers peer support.

Degree of Analysis of the Impact of the Negative Experience within Causal Connections to Form New links and Patterns Within the Self. Sam succeeds in his Life Story to move beyond his trauma to form new links and patterns within the self. More

specifically, he causally connects his discovery of the military peer support program with a personal awakening, both in terms of acknowledging to himself how withdrawn he had become post-mission and in his recognition of the power of social support. Sam explains learning in his peer support training how feeling empathy for others who experienced something similar and connecting with these others can assist with social withdrawal:

> I met the peer support worker […] and I went to a couple of meetings. It seemed to be the part I was missing. It was the understanding or the empathy for people that have experienced. And I'm starting to gain more knowledge about what I wasn't gonna get of therapy was: information. The social aspect of, you know, what you have withdrawn from and how they can help with that. And then that's kind of what I gravitated towards […] I went more towards that than I went towards the therapy, at this point, because you already said I'm screwed up and you want me to leave and what else is left for me to go to you?

New links and patterns are therefore made within the self as Sam re-establishes a sense of belonging. Sam starts to run his own support groups. The theme of redemption therefore now emerges in the Life Story as Sam describes the transformation of his previous negative experiences to positive ones. Positive accommodation occurs. The peer support function leads to the re-establishment of personal agency and to a renewal of Sam's positive identity as a military leader and role model:

> And I guess I ran a few groups and I was […] I was the model I think that they wanted for that area, […] somebody very close: rigid, military minded because they didn't want to fall too far out for it to be accepted, I guess. Remember at the time stigma was very big, so I was [...] I was that somebody you can look at and say we're not going to stigmatize you, because I was very authoritarian. I was very over the top if you really want me to be, totally infantry sergeant. So people wouldn't do that to me ever, even today, they

> wouldn't do that because of the persona that I give when I am speaking to military personnel.

Sam causally links his peer support worker experience with a positive shift in his perspective and cognitive processing. He establishes that looking through the rear-view mirror, as he did post trauma, is destructive. He begins to look forward instead and teaches his peers to do the same. Interestingly however, in his Life Story narrative, Sam describes the positive causal impact of offering empathy and support to peers on the self but there is, in contrast, little reference in the narrative on being on the receiving end of peer support.

Sam contends in the Life Story narrative as well that "once he is asked to leave the military" there is no longer any reason for him to continue with psychotherapy. In the narrative, there is very little elaboration and analysis by Sam of his emotional volatility during and following his difficult mission. He describes a third mission as being uneventful even though he stated feeling that he was becoming a "liability" during this mission. Sam clearly delineates, in his Life Story narrative, a personal preference for action rather than contemplation, analysis or feeling as relates to the strong negative impact of the traumatic events on his self.

Sam presents himself as a pragmatist in dealing with difficult life situations such as when he took the lead in making the end of life support decision for his first wife, when he proactively changed military postings in an effort to adapt once his PTSD

developed, and when he subsequently identified a new role for himself as a peer support worker once his military career came to an end. While acknowledging being action oriented, Sam however also admits to resorting to a certain "encapsulating" of his traumatic experiences. For instance, in his Life Story narrative, Sam is insightful in recognizing the "killing effect" of the supposed atrocities on civilian victims during his last peacekeeping mission but he fails to elaborate on the "killing effect" the witnessing of these atrocities may have had on him. He recognizes however becoming "emotionally volatile". As well, although the use of words such as "eerie", "weird" and "psychologically gripping" describe well the shock and horror experienced upon first being exposed to traumatic events, there is no evolution in Sam's emotional language nor any elaboration on difficult affective states experienced during the mission and as the life story narrative progresses. One can speculate that there is a moving forward but also, in part, a moving away from painful emotions such as when Sam, refuses that family friends visit his dying wife to avoid possibly the emotional "circus". Sam focuses instead on problem-solving and the positive such as discovering the "metal that he is made of" following his first wife's death. There is little emphasis in the narrative on the traumatic sudden loss of his partner.

Sam refers only in passing, as well, to his turbulent second marriage in his Life Story narrative. He acknowledges drinking heavily during this marriage but does not make any causal connections in his Life Story in regards to this highly turbulent period in his life and traumatic events. Finally, Sam does not elaborate on the impact on the self

of the loss of some his peers to suicide during a mission. Rather than attending to or reflecting on emotional experiences, there is a tendency towards distancing and a choice to move instead towards what Sam considers more constructive forward action.

Step Two: Coherent Positive Resolution.

Degree of Resolution and Integration Achieved in the Life Story. Despite Sam's tendency towards distancing, positive resolution is present in the Life Story. The sequence of causal connections made in the Life Story are as follows: positive self-event links are made early in the Life Story as Sam develops a positive professional identity as a young military man; negative causal connections follow when Sam is unable to intervene as he would like to during a difficult mission; and then positive self-events arise anew when Sam learns that he can use his experience with military PTSD to assist others with the same condition. The themes of agency and communion are therefore replaced midway into the Life Story narrative by the theme of contamination (loss of personal agency, loss of a positive soldier identity and communion loss) before being converted, as the Life Story progresses, to a theme of redemption. After an initial lengthy period of destabilization and negative accommodation, Sam eventually succeeds in overcoming the negative impacts on the self as relates to his traumatic life experiences. Life significance and satisfaction is re-established over time. Themes of agency, communion, fulfillment and redemption predominate at the end of the Life Story. There is thus positive resolution, in Sam's Life Story. He succeeds in assimilating

his traumatic experiences in order to re-establish his previous positive military leader identity.

Coherence in the Life Story. Sam presents a structured Life Story narrative that is comprehensive in that it provides information on Sam's background and military career trajectory. There is however little elaboration on important aspects of the formative years and some gaps as concerns certain periods of his adult life, such as when he started to drink heavily following traumatic mission events.

Sam organizes his Life Story around the forming of his military leader identity and its re-establishment post-trauma through peer support work, which allowed him to continue "wearing the medals on my chest." Family appears as well as an important theme. The following four characteristics of global coherence in life stories, described by Habermas and Bluck (2000), appear in Sam's Life Story narrative: temporal, causal, thematic coherence and cultural concept of biography (Table 7).

Quality of Growth. In his Life Story, Sam demonstrates growth that is multi-facetted and mature. Achievement-related agency, generativity and newfound life purpose are demonstrated. There is positive resolution of Sam's traumatic life experiences and a sense of closure. Life satisfaction and a feeling of well-being is reported although Sam distances himself emotionally from the narrative processing of the traumatic impact of mission events on the self. Nonetheless, Sam reports growth, in

his narrative, in the following domains of PTG: increased personal strength, changed priorities, more intimate family relationships and new possibilities.

Table 7

Coherence in the Life Story: Sam

Temporal Coherence	• Linear chronological order is present.
Cultural Concept of Biography	• The Life Story is organized according to events that are normatively used as temporal landmark events. • Gaps appear in description of childhood and marriages.
Causal Coherence	• Autobiographical coherence is present. • Few causal connections are made between different life stage events however.
Thematic Coherence	• The storyline and an evaluative trajectory is present in which meaning was made post-traumatic events: participant succeeded in utilising his negative traumatic experiences to be of service to others also impacted by PTSD. • As such, the PTSD is said to have meaning but there is limited elaboration as to what about his traumatic experiences led to his prolonged distress. • There is a tendency towards distancing in the Life Story. • The narrative is characterized by intellectual/technical language; very little emotional language.

David's Life Story: *"No Longer A Blind Man Trying to Save the World"*

Summary of David's Life Story. David, the third study participant, divides his Life Story into a prologue followed by several life chapters: 1) Childhood; 2) Teenage

Years and Beginning of Military Career; 3) Early Adulthood and Family life; 4) End of Military Career; 5) Survival; and 6) Healing.

Prologue. David's prologue consists of "the chapter before the true first chapter" of his Life Story. It covers, he explains, his background and the early years of his life, "before he is able to be truly cognizant of what is going on around him."

Born in the sixties to a young mother, unemployed and with problems, David considers that, as a baby, his purpose was to meet his mother's unconditional need for love. His live-in aunt also raised David, assuming the role of second mother to him. David explains that, as a young child, he saw his living situation as "normal" until he got older and became more aware of the world outside his home. He then realized that others did not live as his family did.

Chapter 1: Childhood. As David got older, he recounts becoming aware that his mom was "different" and that his aunt was also "a character". He recalls these two mothers demonstrating a lot of "prejudice" towards him, despite their great love for him. At the same time, he narrates being cognizant at the time that his two moms had had their own difficult pasts to contend with.

Chapter 2: Teenage Years and Start of Military Career. During his teenage years, David recounts that his mother was ill. As such, he became a part-time "parent-child" while also attempting to remain a teenager. He got involved with the army cadets and

reached the conclusion that, to get away from his chaotic family life, he needed to join the army:

> Well, I needed hope and when I joined by accident the army cadets, just following a friend from school, I really discovered something. I discovered, thank God it was not a sect, but I discovered something where I felt I fit […]. So, I did, at that moment, everything I had to, to join the army as soon as possible, at the age of 18.

David identified a need for firm guidance that he felt his family was unable to offer him:

> I felt that the values that I was given, that I have learned and the family I had, I know were very loving but [...] I needed a certain structure that I could relate to and where I could feel encouraged, which was not at home.

Feeling put down at home, David also states that he desperately needed, at the time, to be recognized. The opportunity the army presented was "not an escape route but it was a lifejacket" that would allow him to live according to his values and achieve what he wanted from life.

> Oh yeah, I wanted to be a full metal jacket soldier, absolutely. The reason for that is I also wanted, for my values, I also wanted to fight, I would say, evilness. I really believed in that. I still do but differently. I wanted to fight everything that I found unacceptable […] And, for me there was no better way than […] to be a front line soldier.

Chapter 3: Beginning of Military Career/Life as a Soldier. David was recruited and spent four years in the infantry, itching to go on a mission. But, it was the end of the Cold War and there was then "no enemy to speak of." After four years of "shooting blanks", David therefore decided to change his trade. When the conflicts of the 1990's arose David then became motivated to return to the infantry. He trained hard to go on a tour but found himself always at the "wrong place at wrong time". Recognized as a good teacher, he was also considered useful at home, training others going out on tour.

Finally, David got a promotion and was offered a choice of location for a four-year posting. The move worked. David was chosen for an overseas mission. During pre-deployment training, David then hurt his knee, which came close to jeopardizing his participation in the mission. David resolved to go on tour despite his knee injury but recounts being in constant pain during the tour and, in an attempt to compensate for the bad knee, ultimately also damaged his other knee. This constant physical pain, David now realizes, did not help him with later psychological injuries sustained during the tour.

David explains that, as soon as he reached his peacekeeping mission location, he discovered a region already "devastated" by civilian strife. He realized that he got there too late. This had a crushing impact on him. He describes immediately experiencing "another injury". Every time he entered a village, that is, David felt "destroyed" until, he says, he was no longer able to feel. He spent weeks alone with his crew, parked in different villages where massacres had taken place, with lots of time to contemplate. He compares the experience to sitting in a lawn deck chair in the middle of Auschwitz. The entire purpose of David joining the forces had been, after all, to save people. This possibility was now no longer available to him. It made him feel powerless. He recounts that he "wanted to be a soldier, […] I wanted to save these people. I wanted to do something, contribute something true, and truly help […] and everybody was dead!" But then, one day, a near "miracle in the desert" occurred. David and his crew were in a nearly isolated village, on guard for passing vehicles given the presence of "bandits" preying on the vulnerable. A small rusted green car appeared out of nowhere and

several locals of different ages filed out. David narrates that the experience felt surreal. The locals, who had fled the village when the conflict became intense in the region, were now returning, under very dangerous circumstances, to see what was left of their old home. The elder amongst them wanted to be taken to his home. David knew that this was a perilous undertaking. There were mines everywhere and bandits to consider. The family had, however, already faced many dangers to get to the village and it appeared especially important to the elder to go see the state of his home. David understood his need and suddenly felt something in him change. He became determined to grant this old man his wish despite the danger to his life and to that of others. He determined that he could not take the locals directly to their home, given the mines, but that he could accompany the group within a certain distance of their previous abode. He signalled to the locals to walk in the middle of the street directly behind him and warned his men to listen to the radio in case some bandits appeared.

As he marched in front of the locals, David describes a big sensation of heat coming over him. He knew that he was taking a chance and that he could possibly never make it back home to see his children and wife. Deprived of the opportunity to help earlier on, David told however himself that, at least, he could help now. The locals were determined and he concluded that he would be as well. He states that put his foot down on that day in defiance. David recognized in his narrative that he was operating, at the time, based on his spirituality and values. The murdered family members of these locals were innocent civilians, not soldiers. David could not accept the inhumanity of the

situation he found himself in. He contends that he was ready, at the time, to kill any enemy who stood in his way, as required. The opportunity to finally help was that important to him.

The elder cried and cried once in the vicinity of his home. David was unable to communicate with him given that the elder only spoke his native language but their eyes met and David felt they understood each other. He accompanied the locals back to their car. The old man shook David's fervently hand in appreciation. David laughed nervously wanting now for them to leave given the danger and off they went "like a mirage in the desert, I saw that green car go back, turn somewhere, same place it came from, like it never existed." David feels that God sent these people to him. He needed this encounter with these locals, maybe more than they did, to give meaning to his life and to fulfill a life purpose.

David then shifted his storytelling to describe the sober funeral of a fellow solider. At the funeral, David heard the pallbearers crying as they approached. The sound of the soldiers crying, David says, he will never forget. This and other mission traumatic events, David contends, added "soul" pain to his already existing knee pain.

Chapter 4: End of Military Career/Period of Illness. David considers that he never really came back to Canada after the mission. He sought mental health services but kept telling himself, at the same time, that he was okay. He considered that he had

been in a small, non-treacherous tour in comparison to others. He had not been in a direct line of firing. There was nothing to injure him. He told himself; “I don’t know compared to that tour, that tour, that tour, we had it pretty easy. It was relaxed. I’m okay. It was no problem.”

David’s wife knew, however, that something was off but David just left for work as usual. He kept feeling worse. His knee injuries deteriorated but he thought that maybe it was only in his mind. The physical pain was however real. He found himself exhibiting temper tantrums. Then, one day, he had a panic attack at work. He went to see a military buddy he met during his tour who accompanied him to health services and David was placed on medical leave. He never returned fulltime to the Armed Forces after that.

David recounts being afraid to return to his military base. He became convinced that, if he did, they would influence him to act in a way that would further jeopardize his health. The army, he argued, had after all kept him at work despite his severely damaged knees. He decided to request a voluntary release. He recalls being very afraid, however, that it would not be granted: “One of the most terrifying things I could imagine was them not permitting me to leave.”

David felt he was trying to escape a prison. Finally, he successfully moved to the reserves, where he felt he could continue to serve while no longer living with the fear of

being destroyed by “the big entity”. David’s life continued however to go downhill. He left his family, saying that he felt suffocated, constantly angry, nervous or sad. Although he loved his children, he recounts finding it very difficult to be in their presence. He narrates that his life felt like a nightmare except that, “usually one wakes from a nightmare”. He did not. He took courses and became employed as a civilian, telling himself “okay, now I’m doing a job, a new career.” Once in his civilian job, however he found himself on sick leaves for several weeks each year, given that he continued to feel depressed. He would seek help through his employee assistance program yearly but would only address current life issues he was dealing with at the time. He would not address, he explained, his traumatic military past.

David narrates that VAC compensated him at the time for his knee injuries related to his military service and offered health services for his physical injury. David recalls, however, that he never considered at the time that he also had a psychological disability related to his military experiences and this, despite the fact that David was now actively suicidal. He continued to push people away and became unreliable, not picking up the children on weekends as he was supposed to. He came to believe that others were better off without him and convinced that he could no longer go on living.

Chapter 5: How He Survived. David developed a suicide plan. He remembered however his own words with suicidal individuals he encountered in the past. He would tell them that it was foolish to take one’s own life. So out of respect for life and for the

persons he had assisted in the past, David decided to give it a last chance. He calmly reached the hospital and kept looking at his watch, reminding himself that he was supposed to be dead now. The experience felt surreal. He confessed to the emergency doctor that he was there to verify if there was any truth to the statement "there is always a little light" adding, ever so quietly: "And, if it is not true, okay thank you very much for your time and I will finish what I was supposed to do. I am late anyway."

The doctor wanted to hospitalize David but he refused. An agreement was made instead for David to wait for someone to contact him at home. David recounts that he agreed, as he was a man of his word. He walked back home, dispensed of his "tool" for committing suicide and started to live, one long hour at a time and then, progressively, one half day at a time. Eventually, various professionals in outpatient mental health services assessed his condition. Once again however not he, nor the mental health treatment professionals he consulted, made the link between his distress and his military experiences. David talked only about how broken he felt because he was not able to see his children. Finally, he was directed to VAC. The belief was that the federal department could provide David access to mental health services more rapidly than the provincial counterpart. VAC referred David to a psychologist for an assessment and David "exploded" in her office. The psychologist suspected that David was suffering from military trauma. David put in a disability claim with VAC for his PTSD but it was refused. He then proceeded to forget that he even put in this claim:

> I forgot those guys. I was working too hard on trying to stop the fire I had on me, in me, around me, that I even forgot I had done that, because I was like a

> drowning person who is trying to stay afloat by grabbing just anything. VAC is one of those things that I left behind very fast because I needed something that would really help.

He recounts continuing to deteriorate. His furniture was being ceased and he became homeless. David's sister invited him to stay with her because she did not want to think of David sleeping in a park in the wintertime. David sold his furniture, making sure to leave an apologetic note for the bailiff coming the next day to cease this same furniture.

David hoped to make a new life for himself. After a few months, he went back to work for a few days at a time and was offered a temporary place to live. He started to get better and to rebuild. He eventually also got his own place. David explains that it was a small, shabby and "ugly" apartment but it felt like a palace to him. He lived there for a year and regained enough health. He also re-established his relationship with his now grown children: "I love my kids, I could just not see them, I'm not sure why but now I was ready to do what I had to do to get to see them."

David also went to court to address an infraction. In court, the lawyer argued that everything in David's life was fine until he went on his mission. He referred to David experiencing PTSD. At first, David simply thought that his lawyer was making a good plea, or recounting a good story, but slowly David became enlightened. This was in fact his story! He returned to his Employee Assistance Program and shared the story about his court case with the psychologist. He broke down all over again in the office. The latter encouraged David to return to VAC for assistance in light of the new information but, once again, VAC did not recognize David's PTSD claim. According to David, VAC

argued that reports from the variety of professionals he had seen in the past did not refer to traumatic mission experiences. David recounts in his narrative not even recalling seeing however some of these professionals.

Finally, David was admitted to VAC's rehabilitation program for his knee injury and he was able to access mental health services through this venue. He was seen in a specialized mental health clinic where his PTSD diagnosis was confirmed. This now led David to become very angry for all the suffering endured by his family due to his and others' failure to recognize his psychiatric injury in a more timely fashion.

Chapter 6: Healing to the Present. David received specialized treatment at the specialized clinic and it "really, really, really" helped. He considers that it made him a better person. He recounts feeling progressively better and others also feeling better around him. He states that as a result of treatment, "I see things differently; see farther, I see deeper, I understand more." More specifically, David states gradually becoming more cognizant of his personal limits and of "where I am more fragile". David also became motivated, at this time, to seek what he was due from an administrative and financial point of view. He recalls a difficult reliving of the past as he reviewed his VAC file, including all the administrative "refusals" in preparation for his audition. He succeeded, nonetheless, in submitting a good document. His efforts were fruitful.

David explains that he needed this administrative change for the "sake of justice". He needed the truth to be recognized, at the time, a "certificate" of sorts. He considered that he had worked hard to earn this "degree", which included completing therapy and seeking a reversal of VAC disability assessment decisions. He recalls wanting administrative matters to be in order to ensure access to needed services for his condition over time.

Epilogue. VAC finally recognized David's PTSD claim. As such, David feels he now has "well earned diplomas on the wall." At first, he says he "absolutely needed" this official recognition of his psychological injury as relates to his service. Today, however, David considers these as "nice to have". More comfortable and at ease with himself, David is less attached today to the "diplomas", which demonstrates to him how far he has come.

High Point. David says that he is not a person of extremes. As such, he identifies many good moments in his life and many difficult ones as well. This being said, David attributes the birth of his first child as a high point. As a Christian man, the event was a spiritual experience for him. He believes "he touched God" and heard the "sounds of angels" with this experience.

David describes the day of his child's birth as a very snowy day. He looked outside the window nervously waiting. He knew that everything was in the hands of God. He went into the birthing room and participated in playful bantering with his wife. As

his wife pushed, the couple laughed together. David noticed that he never felt so close to her as he did at that moment. His wife whispered that she loved him and kissed him. As he recounts this story, David notices that he feels touched and blurts out: “See, I can (also) have emotions when there are nice moments!”

What his high point says about him as a person or about his life. David explains that he loves children although he now recognizes that he was not necessarily ready to have his children when he first had them. The childbirth event remains however a high point in his life. It made him feel, at the time, that he was “okay” given that he had a career, a wife, a child and that he would soon go on to own a home as well.

Low Point. David recounts that the low point in his life was growing up in a tough neighbourhood. Raised by two women, David says he was a sensitive boy that was “not very rough and tough”. As such, he became the “prey” for the other kids and was even beaten up a few times. The real low point, he specifies however, was when he himself beat a boy that, he claims, did not deserve it. David identifies this action on his part as the behaviour that he is most ashamed of in his life. He considers that it was inhuman of him to beat the innocent child in the way that he did, pulling the boy’s head from under his closed armpit in front of everyone. He notes that on that day this boy was his “prey”.

David contends in the Life Story narrative that the young child may have become his prey because he was even weaker than David, who was at the time also bullied. David however then modifies this statement, realizing that the child wasn’t the weak one

afterall. David claims that he doesn't fully understand why he did it. Maybe, he argues, he did it "out of survival" after so many years of being put down at home and being himself beaten at school. David then concludes that, in fact, he was attempting to join the aggressors that he could not beat. He berated himself for "not standing up like a man but like a jerk" but then also recognized that he was in primary school at the time and therefore very young.

What his low point says about him as a person or about his life. David contends that this part of his Life Story is important because it illuminates how it is better to have regrets about something that one has not done than it is to have regrets about something one has done. In the latter case, one can never take it back. Once you say a word, David specifies, it is no longer yours. It is freely out there. As a result of his personal transgression, saying "no more" became an important part of David's life. He decided that he can be a strong man who stands tall and became this man, in his opinion, when he was finally able to put a knee on the ground to help somebody during his mission. That was the turning point in his life. He never felt as tall as he did that day.

At the same time, David remembers being Rambo like in his stance at the time in his determination to help others and this scared him. He admits today that he was on a blind crusade back then to help others and that he may even have tried to somewhat impose his values on others. He has since transformed this passion into more of a

spiritual practice. He says he is no longer “a blind man trying to save the world.” Today, David believes that you can instead save the world with small daily actions.

This is David’s definition of spirituality today. It is not about going to mass, he says, but about noticing the bright sun outside in the morning and letting one’s self be touched by God through the experience. He learned this distinction between being religious and being spiritual, through an exchange with a good padre friend while he was on his peacekeeping mission.

Turning Point. David recounts that the most important turning point in his life occurred when his lawyer argued in front of the judge that David had military PTSD. At first, David resisted, saying that the lawyer’s tenet was implausible. How could his lawyer see his PTSD but not he after all these years? David’s lawyer was however convincing. David first modified his stance to a “maybe” and this, he narrates, was the first step towards becoming the person he believes he has now become.

David describes then becoming more self-contained; more relaxed, less reactive, more reflective and less impulsive over time with treatment. His experience led him to become a better husband, learning to address one problem at a time. For instance, during the Life Story Interview, David shared that a loved one was currently dealing with a severe illness. As such, David was in pain. He claims to be accustomed now to feeling pain but there is also simultaneously joy. He adds that he knows better how to contain

his pain today, carrying on with his day rather than becoming demolished, as he was in the past.

Significant Persons in his Life. David names his mother whom, David says, impacted his life but not entirely in a positive manner. According to David, she failed to give him strength. Finally, the absence of his father also impacted him negatively. David contends that a lot of the those things that were tough for him as a child, and later as an adult, were so because of his mother and his aunt's negative view of men:

> Some was good, I have good memories, but […] they put me down a lot and they told me that men were the worst thing on earth […] they almost told me I should be ashamed. Ok I exaggerate but that's pretty much the message I got. So that didn't help me.

Luckily, however, David had teachers and, later, commanders who had a positive impact on him.

David then chooses to add a few comments at the end of his Life Story Interview on his lack of knowledge of the term PTG prior to reading about it in the study participation email. As soon as he read the term, David says he knew that this was something he had experienced in the last few years, given his increased efficiency in all domains of his life, with family, friends, work and his wife, expending less energy and more proper energy, relating to his pain, to his weakness and to his strength better, and going beyond healing from PTSD. Asked to elaborate, David explains that he has, in his opinion, not only repaired his house but also the foundation of his inner abode, which he would never have done were it not for what he went through. The psychotherapy helped

him especially to become more functional socially, financially, and in terms of his health. He has achieved this, in his opinion, by addressing his life experiences beyond his military trauma alone.

David recognizes, for instance, his experience with bullying as a crucial part of his Life Story. He contends that, in the past, were he to have come across the individual he bullied as a child, he would have felt the need to identify himself as that guy who did that "horrible" thing. Today, however, David claims that he would be content to simply notice how well and happy this individual now is. He would limit himself to "just saying hi". David considers this decreased emotionality and more self-acceptance of his emotionality profound.

David then makes a final comment in his post-Life Story Interview, expressing how surprised he was to discover, that I, the interviewer, was working on PTG, given the stigma he feels currently exists around the subject. He compares the taboo to that of a sexually abused person he knew who revealed having felt sexually excited during a sexual abuse incident despite his experience of utter horror and disgust. David explains that when you develop PTSD it becomes part of your personality. You experience yourself as a victim and you are half dead. You can't necessarily ask the traumatized individual, therefore, how he or she has grown from the experience, while they are still deeply immersed into the traumatic pain. You need to wait.

Illustration of David's Identity-Making Narrative Processing

Step One: Exploratory Narrative Processing.

Traumatic Experiences Reported in David's Life Story Narrative Leading to Ensuing Threats to the Self. In his Life Story, David addresses several traumatic events. These are presented in Table 8.

Table 8

Traumatic Experiences: David

- Childhood bullying experiences.
- Upon arrival on his mission, discovers devastated villages where ethnic cleanisng occurred. Describes as an Auschwitz-like environment.
- Exposed to landmines during mission, snipers, and bandits.
- Death of a soldier peer.

The most important threat to the self for David appears to occur after he finds himself sitting for weeks on end in an outdoor deck chair, while on mission, in what felt like the middle of Auschwitz. After days spent contemplating and with pent-up frustration in the devastated village, David states he became a single-minded dangerous "Rambo-like" figure determined to assist a family seeking help at whatever cost. The experience is described as positive in that he was finally able to come to the help of victimized civilians. However, David also refers to the experience as his "second injury", explaining how he became emotionally volatile and a danger to himself during the mission given his single-minded focus to not let the aggressors win. The traumatic experiences pose a number of threats to the self (Table 9).

Degree of Acknowledgement of the Traumatic Experiences and of their Impact on the Self. In his Life Story, David acknowledges the negative impact of mission-related events but also the adverse impact of childhood experiences on his self. In the chapter on his formative years, for instance, David recalls his mother's sickness and acknowledges the impact her illness had on him, rendering him, at least on a part-time basis, in effect a "parent-child." A next chapter David causally connects his home experience with his desperate need as a young man to escape from his supposed dysfunctional family life. In recounting his first mission, David then makes self-event connections in which he identifies how deeply wounded he felt when he realized that he arrived too late:

> I really, really hurt, it really wounded me, because I felt like I was […] in the middle of Auschwitz. For me it was the same, no, it was worse. I wasn't born during Auschwitz, couldn't do anything, but then, for me, […] I was too late.

An additional self-event link follows as David recognizes the lifetime impact of losing a fellow soldier:

> The sound of these guys, especially while crying, I will never forget, never. A few things happened there. And I got pain in my knees, then I have pain in my soul and I came back. In fact, I never came back.

Finally, David recognizes how his physical injury may have also added to his feelings of vulnerability during the mission, contributing to the PTSD that ensued. David recounts: "during my tour, I injured my knee […] then my other knee just got worse and […] that constant pain didn't help me there." Once back home from his mission, David at first denies his "soul pain" and minimizes his traumatic deployment experiences in comparison to that of some of his peers. He states: "everything is just fine. For me it was

Table 9

Nature of the Threats Posed to the Self: David

Sense of Safety
• Presence of mines and snipers. • Fear of military employer, whom participant felt jeopardized his health. • High suicidality.
Mental Health
• Mental health increasingly compromised over time, as participant failed to receive appropriate psychological treatment.
Sense of Belonging
• Sense of belonging negatively impacted when custody of his children was lost. • Participant questioning as to whether he still belonged on this earth.
Worldview
• Core assumptions in regards to acceptable human behaviors.
Values
• Unable to accept ethnic cleansing witnessed. Strong sense of injustice. • Difficulty accepting not being able to help.
Socio-Economic Well-Being
• Compromised mental health led to loss of employment and homelessness.

a small tour, not dangerous, there was nothing there to injure me." He admits however to developing a deep seated fear of the military post-mission and a belief, at the time, that the military failed to protect him by sending him on mission as an injured man and, therefore, in a vulnerable state.

> I really, really believed with no doubts that they had the power of life and death over me […] I had all the proof I needed. They scrapped my knees and still wanted me to work. Even if I told them it was very painful all the time.

He does not address however his earlier narration in which he referred to how insistent he had been to go on a mission when the opportunity finally arose for him, and this despite his physical injury.

Following his medical release, David attempts to assimilate his mission experience within his existing identity as a competent professional helper. Once employed as a civilian, he believes he could finally move on. He states: "okay, now I'm doing a new job, a new career." His attempts at assimilation however fail and David continues to deteriorate psychologically. He acknowledges in his narrative failing to make needed connections, at the time, between his compromised mental health, difficult mission events and their negative impact on his self. David recounts: "I would always relate to the closest thing. I had a tree in the face all the time. So, I could not see the forest." He associated instead his psychological symptoms to challenges surrounding his work as a firefighter, stating that "It's a tough job, I talked about the job, but I was never really talking about the job finally."

Others also failed to recognize his service-related PTSD, such as some therapists he consulted and the Veterans Affairs Department mandated to provide assistance. David eventually became highly suicidal. In the narrative, he linked this suicidality with

his post-mission inability to maintain his responsibilities and relationship with his children.

> It was the weekend where I should've taken my kids. I did not. I felt, I don't know […] I was convinced that everything will be better without me, […] It was too bad but everything is gonna be better, when I won't be there anyways.

The theme of contamination therefore dominates in the Life Story post-mission, and failed efforts towards assimilation are made which are followed by negative accommodation as David becomes convinced that others will be better off without him. There is a loss of agency, communion loss in terms of his family, and contamination given his confusion and inability to function. Finally, following his lawyer's legal argument in court, eloquently detailing a story of military PTSD that resonated with David, the latter recognized and acknowledged his traumatized self.

Degree of Analysis of the Impact of the Negative Experience within Causal Connections to Form New links and Patterns Within the Self. Once David makes the self-event connection between his traumatic mission experiences and his compromised mental health, he accesses specialized mental health treatment and starts to heal. In the Life Story, David connects the dots between the various chapters of his life. For instance, David makes a causal connection between what motivated him to join the army and the trauma experienced when he arrived too late on mission:

> I wanted to fight everything that I found unacceptable for/by my values. And for me there was no better way than […] to be a front line soldier. That was the entire purpose of why I wanted to join the forces.

> I know I could not have helped everyone but then, after trying for nearly X years to go on a tour, and I arrive there and everybody was dead.

David then makes additional self-event connections in which he links his adult trauma with the bullying of an innocent boy as a young child and his subsequent feeling of shame as concerns his personal transgression. This leads to a vow to dedicate his life to helping others rather than continue to be an aggressor and a subsequent feeling of shock and ego deflation when he finally goes on a mission but arrives too late. He then jumps on the opportunity to make at least one positive difference for a local family despite the danger involved. The latter experience has however both a positive and negative impact on the self. On the one hand, David felt he finally stood up for what was important to him. At the same time, he alluded to a second injury:

> And something in my head just switched. That was my second injury I would say. I was all ready with my fragvest, all my, I looked like Rambo. I was armed, I was, but then I was not just armed. I became dangerous.
>
> I was ready to instantly kill anybody menacing and go down to save that family […] with a tunnel vision.

In hindsight, David acknowledged the emotional build he felt at the time as he sat for weeks in the desecrated village, left to imagine all the atrocities that transpired before he arrived on site. With the help of therapy, David cam to realize that he became somewhat of a "blind crusader" when he arrived on mission and as a result of early childhood bullying experiences. He acknowledged in his Life Story narrative that his desire to do good was somewhat radical in nature and may have not been healthy. He came to eventually realize that, "well, the crusader is a blind person with a certain belief that he

may call faith and he does what he thinks he has to do. He might hurt as much as he helps."

Step Two: Coherent Positive Resolution.

Degree of Resolution and Integration Achieved in the Life Story. David narrates in that Life Story that he eventually learned from his experience that he cannot expect to save the world and that it is the small actions that he poses on a daily basis that are important. David describes especially a newfound ability to accept life with all its complexities following treatment:

> And now I know that you can save the world with each, in little things you do in a day. That is the way of changing the world, of making a better world.
>
> I feel better. People feel better around me. I see things differently, [I] see farther, I see deeper, I understand more.

He describes becoming spiritually transformed, changed for the better. Confronted, at the time of the Life Story Interview, with the reality of serious illness in a loved one, David adds: "It's very painful but I'm more comfortable with pain. Pain is part of me. Hope, pain, joy, it's all part of me, […] I have to live my emotions."

The sequence of causal connections found in the Life Story are as follows: negative events have negative impacts on the self early on as David struggles with a somewhat negative home and school yard environment; positive events have positive impacts on the self when he discovers the cadets, joins the army and succeeds in developing feelings of competency, autonomy and belonging; negative events then lead to a negative impact on the self when David is unable to make the important difference

he would like to make during a difficult mission. The negative life situation persists and deteriorates markedly once back home for a significant period of time, until David seeks urgent support at his darkest moment. Negative life events then lead to a positive impact on the self as David seeks help, learns about his condition, and subsequently personally transforms for the better. He does not achieve this in isolation but by seeking help from a variety of others. The theme of contamination predominates therefore, at first, when David contends with a difficult childhood, which is then replaced by a theme of agency and communion in late adolescence and early adulthood as David begins his military career. The theme of contamination is then present anew midway into the Life Story narrative as a result of traumatic mission events. David's life is characterized at the time by significant loss of personal agency, the loss of a positive soldier and family man identity, and significant communion loss. Attempts to assimilate his experiences within his existing identity fail. Negative accommodation occurs instead. David develops a negative view of himself to the point of believing that others would be better off without him in their lives. He courageously seeks help and the negative accommodation is then gradually replaced with positive accommodation. The themes of agency, communion, fulfillment and redemption predominate towards the end of the Life Story and there is positive resolution in the Life Story. David describes being personally transformed.

Coherence in the Life Story. David presents a structured Life Story narrative which is chronological, starting with his childhood and formative years, the beginning of his military career, the end of this career due to illness, his spiral downwards into mental

illness, suicidality, homelessness and his slow way back towards healing and positive self-transformation. Interestingly, however there is no mention in David's Life Story as to his peer support work. This may be due to his early peer support career. The following four characteristics of global coherence in life stories, described by Habermas and Bluck (2000), appear in the Life Story narrative: temporal, causal, thematic coherence and cultural concept of biography (Table 10).

Quality of Growth. In his Life Story, David demonstrates growth that is multi-facetted and mature. Achievement-related agency, generativity, newfound life purpose and increased spirituality is demonstrated. There is positive resolution of David's traumatic life experiences and a sense of closure. The growth observed is rich, comprehensive and nuanced in that it includes significant exploratory analysis, reflection and interpretation as well as positive resolution; both pain and joy, suffering and well-being co-exist.

Comparison of the Study Participants' Life Story Narratives

John divides his life chapters based on pre-mission (all good) and post-traumatic mission bad experiences with some later nuanced good experiences. The Life Story is somewhat incomplete in that important life stages are not addressed. In comparison, Sam divides his life chapters into different chapters based on his military upbringing, career and post military career. He mentions some important normative life stages such as childhood although these are limited to a description of the forming of his military

trajectory. David's Life Story is the most comprehensive and complete of the three narratives. The story is divided based on various life stages and, more importantly, causal links are made between David's childhood and his adult trauma.

Table 10

Coherence in the Life Story: David

Temporal Coherence	• Linear chronological order is present.
Cultural Concept of Biography	• The Life Story is organized according to events that are normatively used as temporal landmark events and is comprehensive. • The participant describes his childhood, his adolescence his marriage, the beauty around the birth of his children, and the trajectory of his career.
Causal Coherence	• Autobiographical coherence is present. • Causal connections are made between different life stage events.
Thematic Coherence	• The storyline and a highly evaluative trajectory is present in which meaning was made post-traumatic events: participant succeeded in utilising his negative traumatic to positively transform the self. • The narrative is characterized by insight.

Both John and Sam attribute their growth post-trauma to the development of a new positive identity and life purpose as peer support workers. In comparison, David's growth is more closely associated to his psychotherapeutic treatment. He does not mention his peer support work in his narrative and appears to not be defined by this new role in his life. Finally, John and Sam's stories are more closely aligned to their strong

military identities whereas David's identity is less focused on the military although he also remains focused on positive contribution.

High points involve family for both Sam and David. John refers instead primarily to his peer support work in this section of the Life Story. Interestingly, the theme of personal transgression appears in the three life stories. It is the lowest point in the Life Story for two of the three study participants. Also interesting is the fact that the transgressions are not always mission experiences. John and David reveal feelings of guilt and shame as relates to their transgressions. In regards to his low point, Sam reveals a feeling of pride as relates to his perceived strength when confronted with an end of life decision. He makes no causal connection between the life and death decision as concerns his first wife and the close life and death decision he found himself in during a peacekeeping mission, which he experiences as a near fearful transgression. Sam makes few causal connections in the low point section of his Life Story in comparison to the two other study participants. Also, whereas John and David refer to feelings of shame in their narratives, Sam refers only to feelings of weirdness, aggression and fear.

Turning points involve the three participants each eventually becoming enlightened as concerns the way forward towards recovery. John realizes the errors of his ways following a near suicidal gesture witnessed by his child and re-establishes the primal importance of his family in his life. Sam learns through peer support training that his PTSD did not need to be a life-sentence and that he could use his service-related

traumatic experience to help others through peer support work, thereby re-establishing his identity as a military leader of sorts. David comes to understand through his contact with his lawyer that he has military PTSD, which facilitated his access to the right type of treatment. He learns in treatment that he cannot and should not expect of himself that he save the world.

All three participants name family members as very significant persons in their lives and recount that help seeking was initiated due to a loved one's encouragement (to a large degree for John and Sam and to a smaller degree for David). The need to understand their symptoms also was an important motivator leading all three participants to seek help. In addition, in the three life stories, other significant persons, such as health professionals, peer support trainers and lawyers, also figure prominently in helping study participants with meaning-making as relates to difficult life experiences. Military and Veterans Affairs organizations however at times had a negative impact on rehabilitation post-event.

Comparison of the Study Participants' Identity-Making Narrative Processing

Step One: Exploratory Narrative Processing.

Traumatic Experiences and Threats to the Self. All three participants report traumatic mission events that pose a direct threat to self-continuity. All three narrators refer to dangerous mission experiences that threatened their safety and lives but none focus primarily on their own mission safety. John reports a freeze reaction and a fear as

relates to the possible loss of civilian lives. Sam and David report feelings of intense anger, defiance and Rambo-like feelings of aggression as relate to injustices witnessed, directly or indirectly.

Degree of Acknowledgement of Traumatic Experiences and of Impact on the Self. The traumatic experiences differ but all involve the experience of overwhelming emotions. The primary emotion named by all three participants is a feeling of horror, followed by confusion and a feeling of powerlessness. All three participants describe being taken by surprise and feeling unprepared by ambiguous mission experiences that created confusion and uncertainty, and which involved making complicated choices. All expressed a fear of making an error in their reactions and responses. The three participants described being taken aback by horrendous human behaviour in terms of atrocities, ethnic cleansing, and the use of children as an object of war or having to pick up human remains. The three narrators refer to being highly disturbed by the witnessing of the behaviours that transgressed their value systems and moral codes although a lot remained undisclosed in terms of elaboration on the difficult experiences. Only David appears to have shared with his padre-friend and his therapist on the subject of mission-related morality issues. There is no indication in both John's and Sam's narratives in regards to this level of intimate self-disclosure. There is a greater focus by all three participants on their fear as concerns their own emotional reactions and the response of the self (or lack of) to events and less elaboration on the shattering or disruption of assumptions as concerns others. More specifically, all three participants express the fear

of crossing a line by either resorting to the killing a child, breaking strict rules of engagement, or otherwise placing their or others' lives and well-being at risk.

The theme of personal transgressions or ethical concerns also appears in the narratives of all three participants in regards to non-mission events. David reveals feeling remorse and shame for the bullying of another during childhood. John expresses a feeling of guilt and shame for his near suicidal gesture in front of his child. Sam faces a moral dilemma in regards to an end of life decision.

All three narrators recounted overwhelming difficulties with emotional regulation and/or impulse control during and following traumatic mission events. Serious mental health problems subsequently consume the lives of all three participants once back in Canada, leading to relationship strain, relationship loss and a long-lasting difficulty with functioning. Both John and David become highly suicidal. Sam does not become suicidal but the theme of soldier suicide sadly appears in his narrative as well. Finally, a threat to identity appears to be central in each of the participants' narratives. Both John and Sam refer to a loss of their positive military leader identities. David, on the other hand, refers rather to the dismantling of his saviour soldier or "crusader" identity. Identity loss for all three participants is associated to a feeling of defeat or of self-diminishment as a result of one's inability to act according to one's expectations of the self in difficult mission contexts. The positive soldier identity then becomes further disrupted as a result of mental illness and subsequent loss of military careers.

Finally, all three participants express threats to their sense of belonging to the military post-event. John worries as to how he is being perceived by his subordinates given his fears and when told by a superior that he is not wanted if mentally ill, he becomes greatly distressed and nearly takes his life. Sam admits feeling fearful during his mission of breaking the rules of engagement, given the volatility on the ground, and of consequently losing his military status. David on the other hand becomes highly distrustful of the military and leaves the organization on his own. Both John and Sam express disagreement with the military's practice, at the time, of medically releasing soldiers with PTSD who can no longer deploy. David on the other hand, is more focused on gaining administrative recognition for his service-related injury. He is the only participant who refers directly to a loss of economic wellbeing as a result of traumatic mission experiences.

The theme of contamination and communion loss is present in the lives of all three participants for several years post mission. However, the theme of agency is also present in all narratives in that there is a strong striving in each participant in terms of seeking to understand and to regain mastery over one's painful experience, with relationships being key to each participant's recovery. Redemption also appears in all three narratives in that good comes out of the bad, through the use of one's pain to now help others (generativity), to learn about one's self (personal growth), subsequently re-establishing a feeling of self-efficacy. Table 11 presents a comparison of the sequencing of events in the life narratives of the three participants.

Degree of Analysis of the Impact of the Negative Experience within Causal Connections to Form New links and Patterns Within the Self. There are important differences between study participants in terms of exploratory processing. The greatest number of causal links made by John relate to his symptoms of PTSD following his mission-related traumatic experiences and their negative impact on his self-identity. There is little engagement however with the traumatic mission events themselves. More specifically, there is no detailed elaboration as to what it felt like to be confronted with a child aggressor or to have children thrown at him in the middle of the road as he drives. The greatest number of causal connections made relate to the negative impact of PTSD on the self. John's Life Story is therefore organized around the traumatized self. Symptoms of PTSD, whether past or present, are described using highly sensorial words in comparison to the more cognitive language used by the other two participants. John demonstrates a strong desire to gain a better understanding of his symptoms. He has important insights about a certain inner darkness that he admits may go beyond his PTSD. This being said, his emotional state render him unable to explore this subject in great depth. John is therefore engaged in incomplete/ruminative narrative processing.

Sam also describes his life spiralling downwards following traumatic mission experiences; however, he generates, in comparison to the others, the lowest number of self-event connections in regards to his PTSD symptoms. Sam describes himself as practical and forward-looking and is highly invested in re-establishing his identity as a military leader. The greatest number of causal connections in Sam's narrative relates to

his positive military and peer support careers. The language used in his narrative is military leader. The greatest number of causal connections in Sam's narrative relates to his positive military and peer support careers. The language used in his narrative is technical, as when he describes military Rules of Engagements or arsenal, but is lacking in terms of emotional content and complexity. Sam uses general terms such "eeriness' and "weird" to describe his inner experience. He engages in self-distancing and adopts a forward-looking approach to navigating through life, which appears to be an effective coping strategy.

A more even distribution of illness versus healing, positive versus negative causal connections is observed in David's narrative in comparison to the other study participants. The Life Story spans over a greater number of life chapters as well. Causal links are made between different time periods and events throughout the life course and interrelationships are explored and analyzed in comparison to the other two study subjects. Finally, David demonstrates more interest in revisiting the past in an attempt to gain an understanding of his difficult experiences, in comparison to both John and Sam. Emotional and spiritual language appears in his narrative that is more highly reflective in comparison to the other two veterans.

Table 11

Comparison between the three study participants: Sequencing of Self-Event Links

Life Story Section	John	Sam	David
Life Story	Positive events lead to a positive impact on self.	Positive events lead to a positive impact on self.	Positive and negative events with mostly negative impacts to self.
	Negative events leads to negative impact on self.	Negative event leads to negative impact on self.	Positive events lead to positive impact on self.
	Negative event leads to partial positive impact.	Negative event leads to a positive impact.	Negative event with negative impacts.
	Continued negative impact as well however.	Positive events lead to further positive impacts.	Negative event then leads to a positive impact.
	Increased ability to see the gray: Not all was good prior to event and then all bad, as is in beginning of story.	Tendency towards "encapsulation" (compartmentalization) of negative events and impacts on self.	Positive events lead to further positive impacts. Negative and positive co-exist.
High Point	Positive impacts are consistent with high point section; demonstrates coherence.	Positive impacts are consistent with high point section; demonstrates coherence.	Positive impacts are consistent with high point section; demonstrates coherence.
Low Point	Negative events consistent with low point section; Impact is both negative and positive.	Negative event consistent with low point section; Impact is positive.	Negative event and negative impact consistent with low point section; coherent.
Turning point	Negative to positive is consistent with category.	Positive to positive Is inconsistent.	Negative to positive Consistent with category.
Significant Others	Positive impact of family.	Positive impact of family.	Positive impact of family.

Step Two: Coherent Positive Resolution.

Degree of Resolution and Integration Achieved in the Life Story. All three participants differ in their degree of resolution and integration post adversity. John courageously uses his story to address the stigma as relates to mental illness present in the military. He contributes greatly through his peer support work and is able to see the positive that has come from his difficult experiences. He re-establishes a more positive self-identity as well as a result of his renewed prioritized role of husband and father. He reports more clearly established values that guide his life. John admits however, as well, to a continued feeling of vulnerability and states that his "armour" has weakened with time. He reports continued difficulty with coping and leaves some answers to "another life". He has therefore an unresolved narrative. His story remains, based on his own admission, incomplete.

In contrast, both David and Sam report a positive resolution of their traumatic experiences and their impact on the self. Sam's Life Story is however less complete than David's in that Sam chooses to not engage in depth with his emotionally disturbing life experiences. Sam succeeds nonetheless in re-establishing his positive military identity. David, on the other hand, defines himself as a spiritually transformed self as a result of insights gained through his reflective analysis.

Coherence in the Life Story. There is temporal coherence in all three narratives however John modifies the chronology, applying temporal re-alignments in the form of flashbacks. In terms of cultural concept of biography, David presents a Life Story that is

more extensively organized based on life events that are normatively used as temporal landmarks events. Sam does so as well but to a lesser degree.

Causal coherence is present in all the life stories. All participants use autobiographical reasoning to organize their life stories but not to the same extent. Storylines are all progressive in that participants describe evaluative trajectories in which narrators determine that they have successfully transformed their negative traumatic experiences to re-establish, at least in part, meaning and a positive sense of self post-trauma. All narrators apply metaphors in their narratives to describe the resolution in their life stories. John resolves that he has contributed and done his work but concludes that "his armour is now weak" and that the time has come for him to disengage from peer support. Sam uses the metaphor of looking through the "front view mirror" to describe how he has succeeded in resolving his negative life experiences. Finally, David refers to no longer being a "blind crusader", having learned to make a small difference one day at a time.

Quality of Growth. All three participants report perceived PTG in their Life Story narratives in four of the five domains identified by Tedeschi and Calhoun (1996): changed sense of priorities; closer and more intimate relationships with others; a greater sense of personal strength; and new possibilities. All three participants especially refer to a greater appreciation for and importance of their life partners and/or families in their lives post-adversity. In addition, David reports growth in the spirituality domain.

Discussion

The purpose of the present qualitative study was to explore PTG as an identity-making narrative process in three Canadian veteran peacekeepers, with PTSD, who subsequently became peer support workers and who thereby, were considered to exhibit action-based PTG. The research, consisting of three case studies, reveals several important findings.

All three veteran participants in our study reported perceived PTG following traumatic events. More specifically, two of the three case study participants, John and Sam, spontaneously narrated in their life stories having experienced growth in four of the five domains of PTG described by Tedeschi and Calhoun (1996): personal strength, new possibilities, relating to others, appreciation of life. A third, David, reported growth in the fifth domain of PTG as well: spirituality. Narrative contents were therefore aligned with participant self-identification of perceived PTG during the study recruitment phase. The three Canadian veteran peacekeepers demonstrated action-based growth and generativity in that they used their traumatic mission experiences to support other active military soldiers and veterans also impacted by an operational stress injury. They demonstrated engagement in the organismic valuing process, as reflected in the OVTG. However, when PTG was defined as a two-step identity-making narrative process (Pals & McAdams, 2004), only one of the three veterans (David) was found to exhibit veridical PTG. Individual differences were observed in the veterans' narrative

processing on two levels: 1) apprehension and working through of the negative impact of traumatic experiences on the self; and 2) subsequent construction of a positive and coherent ending to the story through seeing the self as positively transformed, as assessed by identifying causal connections made by each veteran in their respective Life Story narratives. According to this model: 1) self-reported or perceived positive changes in personal relationships, sense of purpose, new possibilities, personal strength and spirituality; and 2) behavioral manifestations of growth following adversity, characterized by a new social role, new relationships and a pro-social mandate, are therefore insufficient on their own to constitute actual PTG.

John engaged in some exploratory narrative processing in his Life Story but this was incomplete. He was insightful in identifying a dark side within himself post-mission, which he causally linked to both traumatic mission-related memories and to his near suicide attempt post-deployment. John verbalized little however about this inner darkness or negative affect. He related becoming flooded with anxiety when emotionally triggered, which made it too difficult for him to explore in more depth his inner experience in order to learn from it, and this despite the passage of significant time since the traumatic events. In contrast to Sam and David's life stories, John's Life Story was characterized by significant recurrent hyper-arousal, persistent worry and intrusive ruminations as relates to his trauma symptoms. Ogle, Siegler, Beckham and Rubin (2017) report a positive relationship between trauma memories that involve intense physiological reactions, more frequent involuntary rehearsal, and greater perceived

centrality to identity and PTSD severity. John's narrative description of his inner distress and unsolicited disturbing thoughts about his difficult mission experiences is also aligned with Cann et al.'s (2011) definition of intrusive rumination.

John admits to no full positive resolution in his Life Story. A somewhat negative tone prevailed in the narrative despite John's valiant effort to create new meaning in his life post-mission through peer support service. As such, John did not exhibit PTG as defined by Pals and McAdams (2004).

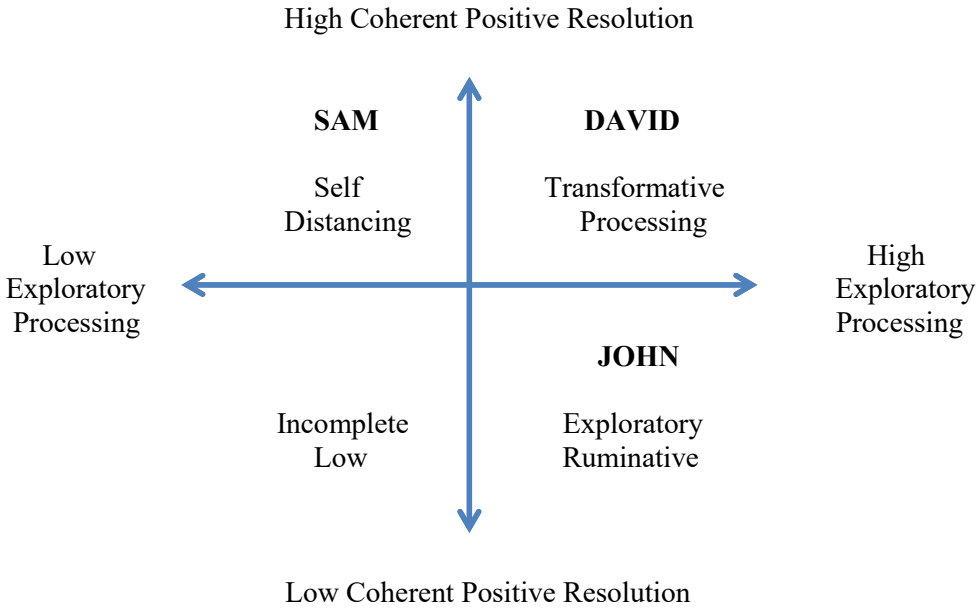

Figure 2. Individual differences between the three study participants in narrative identity processing of difficult life experiences as per Pals' 2006b model.

John falls in the Exploratory-Ruminative Processing Quadrant of Pal's (2006b) model of individual differences in the narrative identity processing of difficult life experiences, as

illustrated in Figure 2; the mentally ill self having become central to his narrative identity post-mission and a full understanding of this symptomatic self postponed by the narrator to “another lifetime”.

In comparison to John’s intrusive rumination, after an extended period of alcoholism, Sam is exposed to peer support and begins to engage in deliberate rumination, or in what Waters and Strauss (2016) describe as voluntary, controlled, problem-solving in an effort to move forward in life. Peer support created an opportunity for Sam to re-establish his pre-PTSD positive identity as a military leader. Positive reappraisals and high positive resolution of traumatic life events were found in Sam’s Life Story narrative. Engagement in exploratory processing was however low. Sam therefore also does not exhibit PTG specifically, as defined by Pals and McAdams (2004). There was minimal revisiting of traumatic events and reflection on their impact on the self in the narrative, Sam consciously having chosen to problem-solve by looking forward in his life rather than inspect from “the rearview mirror”. Sam falls therefore within the Self Distancing Quadrant of Pal’s (2006b) model of individual differences in the narrative identity processing of difficult life experiences (see Figure 2). Ego-resiliency, defined as high self-esteem, feelings of self-efficacy and hardiness, as reflected in Sam’s Life Story, appears to have helped him to eventually move forward following his difficult mission experiences as opposed to getting “stuck” in his story-telling post-adversity. This self-distancing narrative processing style is characterized by high life satisfaction but lower ego development.

In contrast to John and Sam, David engaged in both high exploratory processing and coherent positive resolution of the negative impact of traumatic life events on his self in his Life Story Interview. He falls therefore in the Transformative Processing Quadrant of Pals' (2006b) model of individual differences in the narrative identity processing of difficult life experiences (Figure 2), fully meeting the criteria for PTG as defined by Pals and McAdams (2004). Specifically, David demonstrated eudemonic growth (psychological well-being) in that he reported developing insight and wisdom as a result of exploratory processing. The latter is consistent with current theories of PTG (FDM and OVTG), which are derived from the eudemonic philosophical tradition and include wisdom as an important outcome of PTG (Tedeschi & Calhoun, 2004). Wisdom, or knowledge acquired as relates to the fundamental themes and questions about human existence (Staudinger & Glück, 2011), is often fostered through adverse life experiences similar to those leading to PTG. Direct or indirect exposure to a traumatic event however often precedes PTG whereas wisdom can result from positive life events as well, such as the birth of a child (Webster & Deng, 2015).

Finally, David expressed life satisfaction (subjective well-being) as well as a result of his positive resolution of the negative impacts of the traumatic events on the self. This differs from the scientific literature that identifies PTG primarily as eudemonic wellbeing (Joseph & Linley, 2005) but is consistent with Pals (2006a) who contends that the accomplishment of the two narrative processing steps as relates to adverse life experiences leads to both eudemonic and subjective wellbeing. More specifically, Pals

(2006a) found that: 1) exploratory narrative processing correlates positively with indicators of developmental maturity (defined as ego development, emotional awareness, and cognitive complexity); and 2) coherent positive resolution correlates with life satisfaction (adjustment). The combination of the two, maturity and satisfaction with life, is considered optimal adult development (Pals, 2006a), leading to the "good life" (King, 2001).

Tedeschi, Orejuela-Dávila, and Lewis (2017) state that the wisdom attained following traumatic events, an outcome of PTG, entails cognitive, intellectual as well as affective work. This contrasts with the construct of deliberate rumination emphasized in the PTG literature, which is more cognitive in nature (Cann et al., 2011). Tedeschi and Calhoun (2006) write however that:

> wisdom cannot be achieved through intellectual work alone, the affective experience is crucial. After all, humans understand on an intellectual level that trauma is possible, but we also believe, on an affective level, that we are protected from such possibilities. The occurrence of real traumatic events wrests us from our comforting illusions, sending a shock that may serve as "the beginning of an affectively based knowing of truth that had been denied". (p. 308)

This is consistent with Singer & Blagov (2004) who refer to cognitive, affective and motivational aspects of narrative processing. Most popular theories of PTG fail however to elaborate on the interplay between the different personality subsystems in the PTG process, especially as concerns the cognitive-affective aspect. The work of Pals (2006a, 2006b, 2006c) on the two-step narrative processing of difficult life experiences emphasizes instead the necessity of acknowledging the impact of the adversity on the

self and emotionally processing its impact before positive resolution can take place. An absence of full engagement in the two-step narrative processing leads to one of the following scenarios: self-distancing, incomplete or negative resolution.

Pals (2006b) aligns her research findings with the work of Labouvie-Vief (2003) on emotional regulation. The latter reports that: "optimal functioning involves an integration and flexible coordination of two core emotion regulation strategies or modes - optimization and differentiation." (p. 202). Affect optimization refers to the maintenance of a hedonic tone and involves efforts to maximize personal pleasure while minimizing pain thereby avoiding the build-up of too much tension (positive resolution). Affect differentiation and complexity, on the other hand, refer to openness to negative affect in the interest of meaning making and in the pursuit of personal growth (exploratory processing; Labouvie-Vief, Grühn, & Studer, 2010).

Labouvie-Vief's (2003) Dynamic Integration Theory of emotional development further postulates that the integration of these concepts (affect optimization and cognitive-affect complexity or exploratory processing and positive resolution) involves a dynamic balance that is made possible when moderate to intermediate emotional arousal is present, cognitive resources are available to deal with the emotional activation, and the individual has a pre-existing trait-like regulation style that facilitates maintenance or the re-establishment of one's equilibrium once destabilized (Labouvie-Vief et al., 2010). In our study, John describes overwhelming physiological and emotional arousal that

interferes with his ability to comprehend what is going on with him. In the end, he states needing to leave full comprehension and cognitive resolution of his story to another life. Sam, on the other hand, is also at first emotionally destabilized by mission events but, over time, he succeeds in restoring psychological equilibrium by finding a new leadership opportunity for himself as a peer support worker, distancing himself therefore from his traumatic past. In contrast to both John and Sam, David remains more open and closely connected with his emotional experience, overtaken by these emotions for a significant period of time but eventually succeeding in making meaningful connections and developing insight into himself, which leads to a feeling of being personally transformed. According to David, this transformation was greatly facilitated by his PTSD-specific psychotherapy.

As concerns David's openness to explore his experience, Pals (2006c) found a positive association between exploratory processing and the personality trait of openness. This is consistent with both the literature on growth following adversity, which reports a positive relationship between trait openness and PTG and, alternatively, with the literature on PTSD, which identifies avoidance as one of the important symptoms of the disorder that negatively impacts treatment seeking (Blais, Hoerster, Malte, Hunt, & Jaskupcak, 2014).

The Dynamic Integration Theory addresses the longstanding disagreement between psychological theorists regarding the primacy of affect in determining cognition,

or vice versa, information, which is relevant to guiding clinical treatment. Labouvie-Vief and Marquèz (2004) contend that the relationship between cognition and emotion is dynamic and that more complex, intertwined cognitive-affective structures emerge from earlier systems that are primarily instinctual, reflex-like and sensorimotor in nature. Labouvie-Vief et al. (2010) refer to two demands placed on the individual: 1) emotional development that aims to ensure one's survival and well-being (maintenance of psychological equilibrium); and 2) emotional development in response to cultural forces that require individuals to contribute to group well-being therefore requiring one to tolerate discomfort, the delaying of gratification and temporary psychological disequilibrium in the interest of growth and the development of higher-order moral emotions. The former is described as more closely related to the cognitive-affective processing mode of assimilation, in that the integration of new information from the environment is made in a more automatic, less effortful manner, minimizing therefore differences between existing schemas and new incoming content, as illustrated by Sam. The latter, on the other hand, is described as more closely associated with accommodation in that the individual makes conscious efforts to transform existing schemas into more complex knowledge, as illustrated by David. Co-regulation is however required between the two ways of being (assimilation versus accommodation) in order to ensure the maintenance of equilibrium (an hedonic tone) and to avoid a breakdown (Labouvie-Vief et al., 2010). The three life stories illustrate the participants' prolonged difficulties with co-regulation posttraumatic mission events.

The “good life” according to King (2001) is the result of optimal emotional regulation. The way individuals organize or address their emotions then reveals their characteristic ways of constructing meaning in their lives or, more specifically, their narrative self-identity (Pals, 2006a, 2006b). Bauer (2016), citing Bruner (1990), states that: “meaning making *comes* in the form of narratives.” (p. 10). The tone of the Life Story narrative provides information as to the general qualities of positivity or negativity in the Life Story. Life Story themes, on the other hand, inform as to what holds meaning, is valuable to the individual, and whether these values are fulfilled (Bauer, King, & Steger, 2018). Prominent themes during adolescence and emerging adulthood are identity concerns, whereas generativity (Bauer, Park, Montoya, & Wayment, 2015) and identity revision, especially following life adversity, is of greater importance in older adults (Lilgendhal, 2015). In the section below we elaborate on similarities and differences between the three study participants in terms of narrative identity construction, identity disruption following adversity, subsequent emotional regulation, value orientation, narrative identity revision and generativity specifically in a military and post-military context.

The Narrative Construction of the Military Identity

John’s Life Story narrative begins with the active military period of his life. Both Sam and David recite in their Life Story as well what led them to join the army. Sam recounts following in his military father’s footsteps, adopting his values as relates to discipline, order and authority. David, on the other hand, enlisted in the army following

his experience with the cadets, which he claimed provided the type of structure and male presence he needed in his life at the time. In addition, the army provided an opportunity for him to be of service to others. These findings are consistent with Thompson et al. (2017) who contend that military identities begin to form prior to actual service and with Wong, Kolditz, Millen and Potter (2003) who report that, whereas historically the conscripted soldier's primary motivation for combat was related to unit cohesion (to not letting one's comrades down), today's more educated, volunteer and professional soldier is also motivated for combat by ideological concerns (as reported in Thompson et al., 2017).

Military service-related motivational goals are however not always achieved in complex mission settings. Thompson (2015) writes that military conflict:

> involves a unique combination of stressors, including sleep deprivation, extreme temperatures, dehydration, primitive living conditions, time pressure, complexity, ambiguity, and of course fear and anger – all of which can conspire to rob the individual of the information, time and perspective to make considered decisions (Horne, 2004; Orasanu & Backer, 1996; Shay, 2011; Thompson & McCreary, 2006; Warner & Appenzeller, 2011). (p. 1)

Furthermore, today's military missions pose additional psychological challenges not seen in traditional warfare given: 1) the pervasive presence of IEDs on the ground; 2) insurgencies and asymmetric conflict between militants who engage in ethnic cleansing and other atrocities; 3) unprecedented levels of interaction between military personnel and local populations in comparison to the past; and 4) combat, humanitarian and stabilization roles, now assumed by soldiers sometimes almost simultaneously that, taken together, increase ambiguity and complexity as to the decisions and actions to be

undertaken (as reported by Thompson, 2015). These great complexities surrounding modern military deployments are reflected in the Life Story narratives of all three peacekeepers interviewed. All three narrators describe danger and uncertainty created by IEDs, the close proximity of warring parties and significant distress when exposed to the reality of victimized local population during their missions.

Peacekeeping Missions and the Shattering of World Assumptions

Block (1982) states that "interruptions to previously flowing sequences, frustrations of actions, discrepancies between expectation and actuality and unanticipated conflict which arouses ANS [Autonomic Nervous System]" (p. 291), lead to failures in assimilation and thus to a disequilibrium within the individual that can result in distress and a feeling of helplessness. In our study, for all three participants, traumatic mission events involved an important disruption in terms of meaning, commonly referred to as "the shattering of world assumptions" in the scientific literature (Janoff-Bulman, 1992). The word "shattering" to describe this loss appears relevant in this context, in that participants described in their narratives a sudden reaction of shock and confusion when confronted with mission-related situations beyond their control involving IEDs, but also human behaviors and scenarios that were incompatible with their previously held beliefs about human conduct, instantaneously damaging these beliefs and destabilizing the self. More specifically, the three study participants conveyed a feeling of horror and confusion in regards to the human atrocities or other shocking events witnessed either directly or indirectly during their military missions,

which included, for one participant, having to contend with child aggressors. This is consistent with Litz et al.'s (2009) definition of moral injury as a psychological injury that results from either the perpetrating, failing to intervene in, or simply the witnessing of acts that go against one's moral beliefs. The finding is also consistent with De Clercq and Lebigot (2001) who refer to the terror (rather than fear or stress) experienced by trauma victims directly or indirectly confronted with death, leading to "une véritable effraction à l'intérieur de l'appareil psychique [a veritable break within the psychic apparatus]." (p.16), instead of a pressure on the system, which led to speechlessness. Narrative elaboration in trauma-focused therapy aims to address this speechlessness invoked by trauma.

Physiological and Emotional Hyperarousal

The three study participants described physiological and emotional hyperarousal in response to these mission events, which persisted once back in Canada. The three veteran peacekeepers referred, more specifically, to similar overwhelming feelings of powerlessness, self-defeat, fear, anger, frustration and aggression experienced during traumatic mission events that were physically difficult to contain. John froze at first when confronted with a child aggressor but reported on a second occasion nearly shooting another child. Sam narrated becoming emotionally volatile and a "liability" as a result of pent-up aggression related to the witnessing of atrocities. Similarly, David described becoming dangerous and Rambo-like in his single-minded determination to not let the aggressor win, after weeks of sitting in an outdoor deck chair emotionally

overwhelmed by the desecration around him. Shay (2009) contends that moral injuries experienced by soldiers are like “a kick in the stomach” that is “coded by the body as a physical attack” (p. 294; as reported in Thompson, 2015), which causes the soldier to react physiologically with “the same massive mobilization” (Shay, 2011, p.186 as reported by Thompson, 2015). This is consistent with van der Kolk (2013) whose latest book title conveys how, in the case of trauma, “The Body Keeps The Score”.

Disruption to the Soldier’s Biographical Narrative Identity

The three study participants recounted initial strong visceral and distressing reactions to the horrendous behavior of others during the traumatic events. However, most prominent in all three narratives, were causal connections as relates primarily to the self. That is, narrative content associated with the trauma and its aftermath was primarily focused on the peacekeepers’ visceral and emotional reactions, emotional responses or states, during and following difficult mission events, and, more prominently, on the extent that their personal reactions and conduct (or non-conduct) deviated from the veteran participants’ previously held beliefs and expectations of the soldier self. This included the expectation of the self that one be effective and powerful (rather than powerless) in protecting and in making a difference in the lives of innocent civilians and that one exhibit stoicism, behavioral and emotional self-control, when confronted with difficult mission experiences rather than react with fear, horror or behavioral acting out. Finally, all three veterans related painful feelings of either guilt, shame and/or fear as relates to perceived personal transgressions, or near personal

transgressions, as a result of difficult-to-contain emotional arousal, during and/or subsequent to deployments. The tendency towards harsh self-questioning post-event is consistent with Janoff-Bulman and Frantz's (1997) contention that, when faced with "the horror of meaninglessness" (p. 95), trauma victims will initially engage in a re-evaluation of one's own role in the extreme event, which often can occur in the form of self-blame. As the present study findings reveal, this initial phase can be long lasting.

The Impact of the Military Master Narrative on the Self

Expectations of the self, revealed in the three Life Story narratives, were consistent with military training messaging and with the cultural image of soldiers held in Western society. As a leader, John expected of himself, for instance, that he be composed, or at least that his fright or horror not be apparent to his subordinates, during his mission. Both he and David then minimized their psychological symptoms once back home, insisting that they were fine and not in need of help.

McLean et al. (2017) define master narratives as "culturally shared stories that provide frameworks within which individuals can locate and story their own experiences." (p. 3). Several researchers have written about the exaggerated emphasis on self-reliance and emotional control in the military or of the intensification, within military culture, of traditional masculine socialization promoted in civilian populations (García, Finley, Lorber, & Jakupcak, 2011; Heath, Seidman, Vogel, Cornish, & Wade, 2017; McDermott, Currier, Naylor, & Kuhlman, 2017). More specifically, Lorber and

García (2010) argue that military training may deliberately instill emotional control in soldier trainees given the belief that the ability to control emotion during deployment will facilitate survival and the mission's success. The authors claim that, in the military, "strong conformity to hypermasculine ideals, particularly emotional control, is institutionalized and part of a strategy to prepare men for combat." (p. 297). According to Lorber and García, a soldier's reluctance to feel post-trauma may therefore be part of the avoidance cluster of PTSD but may also be reflective of an inner conflict between letting one's self emote versus the need to maintain one's masculine identity.

Psychological symptoms may particularly stand in opposition to the soldier's male identity and expectation of his self in terms of male strength and independence. These psychological symptoms may be viewed by the soldier as a sign of personal weakness and may therefore be kept hidden, interfering with treatment seeking (Lober & García, 2010). John, for instance, mocked himself and labelled himself as weak for feeling afraid. He denied his mental illness at first but did eventually seek professional help. He did not engage however in sustained psychotherapeutic work. Sam, on the other hand, reported resorting initially to heavy drinking and social isolation in response to his mission-related traumatic experiences. Green et al. (2010) report that many male soldiers resort to substance use instead of emotional processing and expression, the former being, sadly, more aligned with traditional male gender role norms in contrast to the latter. Finally, David denied being traumatized at first, downplaying his mission experiences in comparison to that of more mission-exposed peers. Arriving on mission after the fact,

David appeared to suffer from a "spoiled identity" post-mission; a term adopted by Goffman (1963) to describe the veteran's perceived failure to achieve what they may consider full veteran status given a lack of exposure to, or perceived insufficient exposure to, conflict. This spoiled identity may then also have been compounded for David post-mission by VAC's initial rejections of David's benefit claims for his service-related psychological condition.

Nash, Silva and Litz (2009) write that the common conceptualization of mental disorders as personal weakness in Western society was "born and nurtured in military services in wartime." (p. 790). More specifically, Nash and colleagues refer to a historical master narrative on the subject of mental illness that they claim was originally created as a direct response to war-related psychological injuries. In 1916, for instance, in response to the epidemic of shellshock victims in British, French and German troops that were depleting government coffers, Nash et al. (2009) report that psychiatrists adopted the diagnosis of "hysteria" to describe the persistent distress or functional impairment reported as a result of war. In their qualitative study of ex-servicemen, Green et al. (2010) similarly found that, in the military, signs of perceived weakness are sometimes responded to by insults to one's manhood. In his Life Story narrative, John was keenly aware of the stigma in the military as relates to mental illness, recounting how he was compared to "a faggot" when he exhibited symptoms of PTSD once back in garrison. This contributed to his feeling of shame surrounding his mental illness. The finding is illustrative of the psychosocial construction of the Life Story described by

McAdams (1996), which specifies that: “although the story is constructed by the person whose story it is, the story has its constitutive meanings within culture.” (p. 307). The finding is also consistent with the literature on stigmatizing beliefs in the military that involve:

> perceived negative, and possibly inaccurate, perceptions about the personal or physical characteristics of a person and often relate to perceived weakness or inadequacy associated with having a mental health problem (Blaine, 2000; Greene-Shortridge, Britt, & Castro, 2007). These concerns can be a consequence of self-generated stigma and can also be an internalization of negative beliefs, behaviors, and myths about mental health that arise within military organizations. (Osório, Jones, Fertout & Greenberg, 2013, p. 540)

In their study with 23,101 UK military personnel deployed to Afghanistan and Iraq, Osório et al. (2013) found that stigma and barriers to care perceptions were significantly, and substantially higher in military members during deployment, in comparison to personnel returned home.

Disruption to the Veterans’ Three Basic Psychological Needs

The important psychological distress reported above by the three Canadian former peacekeepers as relates to mission experiences and their aftermath can be framed by applying Deci & Ryan’s (2000) Self-Determination Theory, an inherent component of both Joseph and Linley’s (2005) OVTG and Hobfoll et al.’s (2007) Action-Based Theory of PTG. Self-Determination Theory identifies three basic human psychological needs required for individual well-being: the need for autonomy, competence and relatedness.

In the present study, traumatic mission events negatively impacted the veteran participants' psychological need for *autonomy*, defined not as independence or individualism but as self-determination or the ability to behave in accordance with one's values and beliefs (Ryan & Deci, 2000). That is, all study participants reported being significantly emotionally distressed during their difficult missions given the witnessing of events that went both against their moral convictions of acceptable human behavior, as well as their belief as to required personal action, as non-civilians, to come to the defense of the defenseless. When this military or "right" action could not be executed, a crisis in meaning and a disruption to the military identity followed for the three study participants. The experience of distress was then further compounded by feelings of personal transgression either during the mission, as when Sam became afraid of breaking the Rules of Engagement during a violent exchange or, following the mission, when John regrettably made a near suicide attempt in front of his child.

The veteran participants' psychological need for *competence* was also negatively impacted by traumatic mission events. As military men, study participants dedicated years to military training in order to obtain the necessary competence to serve their country. They then waited for deployment opportunities in which they could apply their newfound skills in assisting others. The three study participants described great dismay in their life stories as prior strong feelings of military competence were quickly replaced, during traumatic missions, by personal feelings of powerlessness and ineffectiveness due to complicated Rules of Engagement, arriving too late on the scene or other highly

complex situations in which how to conduct one's self was less than obvious. The veterans' psychological need for competence was then further undermined as a result of post-event mental illness that seriously impacted the three participants' ability to function once back in Canada, prematurely ending their military careers. Mobbs and Bonanno (2018) write that: "veterans may experience grief-like symptoms in response to the perceived loss of their military self […] and the roles, values, and sense of purpose this lifestyle may have held for them." (p. 139). This includes grief-like reactions as pertains to disruptions in one's self-worth, worldview, changes in one's social environment and to important relationships held within the military.

Indeed, traumatic mission-events posed a serious threat to the three study participants as concerns their sense of relatedness or *belongingness* as well. John described becoming the product of friendly jokes at first during the mission when he became fearful of leaving the army compound. Green et al. (2010) describes this ability to tolerate and participate in such banter in military units as:

> a key marker for being accepted into the 'in group' and being able to access the benefits of camaraderie. This aspect is also consistent with constructions of masculinity described in the literature which show how humour is a mechanism through which men are positioned within dominant and subordinate groups. (p. 1485)

The pleasant banter with John was, however, eventually transformed into outright rejection when his superior informed John post-mission that, if now "weak", he was no longer welcome in the unit. Unit cohesion is emphasized in the military to ensure military prowess and effectiveness and is often described by veterans as being "family-

like" (Smith & True, 2014). Green et al. (2010) contend however that this is paradoxical given that: "hegemonic masculinity in the military incorporates aggression, violence and macho behaviours on the one hand and a caring, sharing ethos based on strong interdependent bonds on the other hand" (p. 1485). These strongly forged bonds can also foster vulnerability in that they may also promote a culture of intolerance towards anyone perceived as 'defective' (p. 1484).

Sam became fearful of being rejected, or more precisely expelled, from the military when Rules of Engagement became difficult to respect during a complicated mission event. Later, when meidcally released, he felt kicked off the sports team. David, on the other hand, left the military in his own post-mission given his "shattered trust" (Maercker & Horn, 2013) in the organization. He then later became suicidal, having come to the conclusion that others, and especially his loved ones, would be better off without him. David developed therefore, during his active suicidal phase, *perceived burdensomeness* (Silva, Ribeiro, & Joiner, 2015, p. 316) or the belief that his death was worth more to others than his life. John, on the other hand, reported primarily a sense of *thwarted belongingness* (p. 316), a feeling of alienation and disconnection from others during his acute illness phase due to his severe symptoms. According to Joiner's (2005) Interpersonal-Psychological Theory of Suicide, perceived burdensomeness and a sense of thwarted belongingness, experienced simultaneously and combined with the capability to take one's own life (the latter being more frequent in veterans than civilians given their familiarity with arms and loss of life), lead to potentially lethal suicide

attempts. Sadly, the three study participants in the present study all related being impacted by suicidality in their life stories either directly or indirectly. A recent Government of Canada study revealed an overall 1.4 times higher risk of dying by suicide in male Canadian veterans compared to the male Canadian general population, with the youngest males being at highest risk (Simkus, VanTil & Pedlar, 2017).

Disruptions to strongly forged military bonds may also cause important challenges to some soldiers transitioning into civilian life, especially in the case of premature medical releases from the military, in which one's biographical master narrative, or framework as to how life is to unfold, both in terms of type of life event and timing of these events, is disrupted (McLean et al., 2017; Rubin et al., 2009). The scientific literature indicates that adaptation to civilian life is successful for most veterans (Iverson, et al., 2005; Thompson et al., 2014). Some veterans however fail to find in civilian life similar levels of social support to that experienced in the military, in which individuals coalesce during training in order to form one well-oiled "fighting machine" (Green et al., 2010, p. 1483). Sadly, in the present study, all veteran participants also narrated significant familial stress post-deployment. This led to divorce and separation from family for two of the three participants.

Orazem et al. (2017) found that two-thirds of the Afghanistan and Iraq war veterans studied, when asked to write about their reintegration difficulties, referred specifically to challenges with identity adjustment. The following interrelated themes

were identified: 1) feeling like one does not belong in civilian society; 2) missing the military's culture and structured lifestyle; 3) holding negative views of civilian society; 4) feeling left behind in comparison to civilian counterparts given their military service; and 5) difficulty finding meaning as a civilian. In their qualitative study of 24 transitioning Afghanistan and Iraq veterans that applied an inductive thematic analysis approach, Ahern et al. (2015) discovered three similar overarching themes: 1) Military as Family (who took care of them and provided structure); 2) Normal is Alien (disconnection from people at home, lack of support from institutions and of structure, and loss of purpose upon return to civilian life); and 3) Searching for a New Normal (through seeking of peer support, adopting an ambassador role or easing through with the passage of time). Finally, Smith and True (2014) conducted 26 Life Story Interviews with recent American Veterans returning from service in Iraq and Afghanistan and adopted the term "warring identities" to describe the struggle to resolve contrasting identities faced by soldiers during the transition period. In the interpersonal domain, the authors found for instance that, in civilian life, the "bonded self" must become once again individualized and relational but that this poses a significant challenge to soldiers who, during combat, must dissociate emotionally from family in order to remain effective and who, once they return from deployment, wish to protect their loved ones from their experience and who may also not have the words to communicate the "store of muddled feelings that are difficult to communicate" (Smith & True, 2014, p. 157). Castro & Kintzle's (2014) Military Transition Theory states that thwarted belongingness

and burdensomeness experienced by releasing military members may then contribute to veteran suicide or suicidal behaviors.

Narrative Revision and Co-Construction

Both John and David at first ignored their wives' feedback in regards to their ill health. Meanwhile, Sam withdrew through excessive drinking. Significant others were however, at the same time, instrumental in assisting study participants with the forming of causal links between traumatic events and their negative impacts on the self over time. Both John and Sam referred to the importance of family in recognizing their mental illness and in directing them towards care. In doing so, these family members contributed to the study participants' construction of new narratives as concerns the psychologically impacted self. For David, his padre friend assumed a similar pivotal narrative co-construction function. The legal argument presented by David's lawyer in court was however particularly impactful in assisting him with the construction of a coherent life narrative post-mission. In contrast, the prejudicial and stigmatizing attitude reportedly displayed by John's superior when the latter displayed symptoms of mental illness hindered John's efforts to re-establish a positive self-identity post adversity.

McLean et al. (2017) contend that those who deviate from master narratives (such as the narrative of the stoic, in control soldier) must create alternative narratives. These alternative narratives are important in that they can facilitate cultural change, possibly even replacing the master narrative over time. Instituting cultural change is however an

arduous task that cannot be achieved alone. McLean et al. state that finding an alternative narrative is about finding one's group or one's subculture. The three participants in the present study all succeeded in this task in two specific ways. First, all the study participants experienced success investing in identity domains other than their military identities principally by becoming more engaged in their familial role as a spouse and as a parent post-mission. Second, through their involvement in a peer support program, the subjects also eventually adopted a new self-narrative in which PTSD was no longer experienced as a life sentence but, on the contrary, as a means to help others and contribute to changing the military culture. For all study participants, however investment in other existing identity domains and in the creation of new ones occurred only following a lengthy phase of acute illness. This identity shift may have been inhibited by "the "pull" of an adventurous, exciting life as a soldier […] who at that point may "push" away the alternative of family life." (Cooper et al., 2017, p. 55) and from civilian life.

The presence of a more established positive military cultural script as concerns soldier identity continuity or adjustment post service may have been helpful to the injured veteran peacekeeper study participants but appeared to be mostly inexistent with the exception of the peer support opportunity. Admiral the Lord Boyce states the following:

> There is a need to inculcate an attitude *on joining* [emphasis added] that recognises the inevitability of eventual transition; an attitude that ensures adequate future planning; and an attitude that takes the resilience of the

> battlefield and transfers it into the resilience of transition - financial, cultural, and emotional. (Forces in Mind Trust, 2013, p. 2)

Castro and Kintzle (2014) concur stating that: "Prevention should start from the day service members enter the military." (p. 6). A second UK report entitled *Veterans Transition Review* makes the following key recommendation:

> All personnel should complete an online Personal Development Plan, beginning at the end of basic training. The PDP should include a portfolio of the individual's education, skills and achievements; a plan for their development, including long-term career aspirations and the qualifications required; education modules on "life skills" including housing and financial management; and a checklist to ensure the individual is considering future needs and taking the actions required. Personnel would be monitored by their commanders in completing the PDP, which will inculcate a sense of responsibility for personal development and ultimately make for a smoother and more successful transition. (Ashcroft, 2014, p. 15)

According to Cooper et al. (2017), this extensive planning and preparation should occur years in advance of one's potential discharge to "navigate a complex cultural transition when moving between military and civilian environments" (p. 53), especially when the transition occurs prematurely due to service-related illness. Present study findings indicate however that equally or more important to these early life skills interventions are the establishment of positive military cultural scripts as to the soldier's continued important role and opportunity for contribution post-service.

Government funding for peer support programs is one helpful way of facilitating identity adjustment for injured veterans and in creating alternative cultural narratives. In the present study, both John and Sam reported that peer support work provided them a renewed sense of purpose, significance and competence. As well, the peer support

function allowed them to remain a part of the military family, albeit in a different role. A grounded theory qualitative study, conducted by Moran et al. (2012), with 31 employed peer support providers who experienced mental illness, revealed that the sharing of one's personal story served as a key mechanism in contributing to the recovery of study participants. It allowed them to transform their previous illness Life Story to one of recovery. The term recovery as applied by Moran and colleagues differs however from the concept of recovery referred to in the trauma literature, which is defined as a return to pre-event baseline after a relative short period of disturbance (Bonanno, 2004). Moran et al, refer instead to recovery in the context of the mental health recovery movement which defines recovery as: "living a satisfying, hopeful, and contributing life, even when there are on-going limitations caused by mental health problems and illnesses." (Mental Health Commission of Canada, 2012, p. 15).

Moran et al.'s (2012) write that, for PSWs, "The fact that the lived experience is the source of competence allows a shift from shame and concealment about past experience (Hinshaw, 2007; Thornicroft, 2006) to a dialogue about the illness that generates new meaning and identity." (p. 314). As well, the authors found that engaging in peer support can effectively meet the mentally ill individual's three basic psychological needs identified in the Self-Determination Theory. In their study, Moran et al. found that study participants met their need for autonomy through their freedom to disclose and to conduct work based on their values. The need for competence was met through the use of one's personal experience as a resource to assist others. Finally, the

need for relatedness was particularly salient and was achieved through the opportunity to connect intimately with other peers. Mancini and Lawson (2009) warn however of the risks involved in emotional labor, which they define as "the work of regulating feelings in the context of employment." (p. 3). The latter authors identified, for instance, a risk of emotional exhaustion, within the context of peer support work, which may lead to burnout. This was indeed illustrated by John who narrated how every peer's story took away a little piece of him.

Despite this, both John and Sam described personal growth and the re-establishment of a sense of belonging through their peer support worker roles. Interestingly however David did not refer to his peer support work in his life narrative. This may be because he was fairly new to the peer support role in comparison to the other two study participants or because the peer support function was not central to his growth in comparison to John and Sam. Military peer support may be more relevant for veterans with am ore slaient military identity.

David exhibited PTG in that his self was reportedly spiritually transformed post adversity. This transformed self became central to his identity post-treatment. John and Sam also both exhibited impressive growth following their traumas in that they established new meaning and purpose in life as well as improved family and peer relationships. This growth involved positive reappraisals but went beyond simple benefit finding given their behavioral activation as peer support workers. However, in contrast

to David, John and Sam did not exhibit PTG specifically, as per Pals (2006c) definition of transformational growth, given that they did not exhibit the two identified narrative processing steps towards PTG. Finally, the growth exhibited by the three study participants differs from recovery, defined as a return to pre-event baseline, in that the three veteran peacekeepers describe being permanently changed by traumatic events. John reported continuing to exhibit important symptoms of PTSD and this PTSD became central to his identity post-event. Sam succeeded in re-establishing his salient military leader identity as a result of his new role as peer support worker. David described himself as spiritually transformed, learning to appreciate each day.

Experiential Growth versus Reflective Growth

Janoff-Bulman and Frantz (1997) wrote that trauma leads to "The Terror of Meaninglessness" (p. 94) that causes one to question the meaning *of* life. For healing to occur, the trauma victim must then gradually engage in "a 'value'-ation, or the re-evaluation of one's life" (p. 98) to form new meaning *in* one's life. In the present study, the three participants narrated disequilibrium or a disruption to their previous narrative identity as a result of traumatic events. This disruption lasted, at the very least, several years. The three veterans studied, however, also reported intrinsic motivation, or a drive to get better, which was reflected in both their involvement in peer support and professional help seeking. This is consistent with the OVTG and similarly, with Labouvie-Vief (2003) who theorizes that the disequilibrium itself can create a push towards a re-establishment of equilibrium in the form of emotional regulation and ego

development.

Martela and Steger (2016) identified three facets of meaning *in* life: 1) purpose; 2) significance; and 3) coherence. In the present study, all participants interviewed revealed over time a new found sense of purpose and significance in life as a result of peer support, or alternatively, through extensive psychotherapy. An important distinction was however found between the three study subjects in the third facet of meaning in life: coherence, as measured through the coding of autobiographical reasoning (causal connections made in the Life Story narrative).

Bauer et al. (2018) contend that value orientation (purpose in life) and value fulfillment (life significance) are motivational and are therefore aligned with the basic psychological needs identified in Deci and Ryan's (2000) Self Determination Theory. According to these authors, coherence or value perplexity (narrative complexity, differentiation and integration) however is structural rather than motivational and may therefore constitute an additional distinct basic human psychological need. Differentiation in narratives is observed when multiple emotions and different points of views are present. Integration, on the other hand, is present when accommodation (the making of links between two previously disconnected ideas) and temporal, thematic and causal coherence (continuity, consistency) is observed within the narrative (Bauer et al., 2018). Bauer et al. argue that the cognitive ability of differentiation and integration cannot be determined using self-reports but can be assessed using narrative means by

studying the structure of stories told. Present study findings demonstrate how a narrative methodology can be applied to the study of the PTG process. More specifically, study findings illustrate differences in differentiation and integration within the narratives of the three study participants, which led to distinctions on the types of growth exhibited by the veteran participants following adversity.

In the present study, John exhibited the least coherent life narrative in that his story was the least complete. That is, John made few causal links that explored in depth his symptomatic self and his persistent symptoms of hyperarousal and emotional triggers as relates to traumatic events. As well, John made no reference to several normative life stages in his narrative, such as his childhood, adolescence, marriage, and the birth of his children and choice of career. John did engage in exploratory processing, however intrusive rumination predominated in his life narrative. The dominance of the traumatic memory and of the symptomatic self in the organization of John's Life Story is consistent with Berntsen, Willert, and Rubin's (2003) findings of centrality of event in PTSD in which "the trauma is remembered too well and too often and is too frequently referred to in the process of ascribing meaning to surrounding memories and generating expectations for the future." (p. 690). Despite this, John did re-engage in life, finding a new purpose through his peer support work.

Sam's Life Story was more complete in that he referred to a greater degree to normative life stages in his narrative, ending with his new role as a peer support worker.

However, he did not make specific causal links between normative life stages and his traumatic self. Given Sam's conscious decision to distance himself from his traumatic past, many aspects of Sam's story remains untold.

David, in contrast, presented a more complete Life Story in which several causal connections were made between his traumatic self, his childhood and his adolescent ideals. Both John and Sam illustrated therefore experiential growth, described by Bauer (2016) as a concern for the deepening of one's skills, experience of activities and relationships (p. 166) but only David exhibited reflective growth (PTG), which is characterized by a concern for deepening one's conceptual understanding, intellectual development and perspective in life through the forming of extensive causal connections between different life events and chapters, revisiting how one came to define one's self and redefining one's self, thereby reaching a positive resolution of the trauma and its negative impact on the self through narrative identity reconstruction. This result may be illustrative of David's more extensive engagement in psychotherapy in comparison to John and Sam. The findings are also consistent with Bonanno and Burton's (2013) construct of regulatory flexibility and Kashdan and Rottenberg's (2010) similar term of psychological flexibility, which disputes the primacy of specific regulatory strategies as consistently more adaptive and healthy.

Janoff-Bulman and Frantz (1997) hypothesize that an "affective load" (p. 101) that is overwhelming may impede the two meaning-related tasks trauma survivors must

address post-event: “minimizing the terror of a meaningless world and maximizing value in life.” (p. 101). Labouvie-Vief (2003) refers as well to a possible lack of cognitive resources and to personality factors that may impede processing of traumatic material. Finally, Heintzelman and King (2014) contend that low levels of meaning spur meaning-making and accommodation. In instances where meaning is felt to be high, no search for meaning will occur. The three participants in the present study experienced a crisis in meaning post-mission, however they differed in the meanings made following their adversity. John appears to have engaged in unhealthy meaning making (Pals-Lilgendahl, McLean, & Mansfield, 2013) through the forming of an enduring negative view of himself as damaged. Sam, on the other hand, succeeded in economically regenerating his pre-existing meaning of his self as a strong military leader through the adoption of a military peer support worker role. He became high functioning but also distanced himself from his traumatic past by pushing it to the side. In contrast, David’s reflective growth or PTG involved a movement towards more intimate connection with the self in that he came to realize the error in his past motivations through exploratory, narrative processing and new meaning-making. This involved the forming of a vaster array of causal connections between different aspects and stages of his life, in contrast to the other study participants. It also included exploring the impact of his childhood experiences and that of his chronic physical pain before and during deployment on his subsequent traumatic reaction to mission events. In contrast to David, Sam and John made no causal connections between pre-mission related factors and their traumatic reactions to mission events.

The importance of exploring the impact of chronic pain and physical health on PTSD presentation in the veteran population has been noted in the scientific literature (Forbes et al., 2019). The impact of Adverse Childhood Experiences (ACE) on military trauma has however been less studied. ACEs refer to any of the following types of childhood exposure experienced before 18 years of age: psychological, physical, or sexual abuse; domestic violence; household relational stress (such as separation, divorce), living with household members who were substance abusers, mentally ill or suicidal, or who exhibited criminal behaviors (Anda, Butchart, Felitti, & Brown, 2010).

Blosnich, Dichter, Cerulli, Batten, & Bossarte (2014) compared the prevalence of ACEs among a large sample of individuals (n = 60 378) with and without a history of military service and from different service eras (voluntary enlistment versus draft) and found an increased prevalence of ACEs in those who served in the military. In particular, men with military service during the volunteer enlistment era had a higher prevalence of ACEs in all ACE categories studied in comparison to men without military service. Blosnich and colleagues conclude therefore that enlistment may serve as an "escape from adversity" (p. 1041) for some men. A qualitative evaluation for enlisting in the military conducted by Ginexi, Miller, and Tarver (1994) identified a variety of economic and psychological reasons for joining the military which also included "*get away/escape*" (p. iv) and other motivational factors such as: historical interest (e.g. other family members in the military), self-improvement, job/skill training, money for education, floundering, time out, and no other job prospects. In the present

study, John made no mention of what motivated him to join the military, life chapters preceding his military career being absent from his narrative. In contrast, in his Life Story narrative, Sam refers to his military father who became a strong role model for him, inciting him to choosing a similar career path. Sam makes no subsequent causal connection in his Life Story narrative between his wish for a military career trajectory similar to that of his father's and the psychological impact of his disrupted career trajectory due to PTSD. David, on the other hand, identifies both the wish to escape a difficult family life and a desire for self-improvement (wanting to make a difference people's lives) as his reason for enlisting. He then makes causal connections between what may have been an unrealistic self-improvement dream to save others as a young man and his subsequent PTSD when mission circumstances prevented him from timely assisting a highly victimized population.

David's causal connections in his Life Story narrative led to humility. David became more realistic in the difference he now expected to make in others' lives, leading to more equanimity in his life. He reported becoming spiritually transformed. This is consistent with the PTG literature, which identifies spirituality as an important domain of PTG growth. Finally, Wayment, Bauer, and Sylaska (2015) also refer to the "quieting of the ego" to describe the "subjective stance toward the self and others in which the volume of the ego is turned down so that it might listen to others as well as the self in an effort to approach life more humanely and compassionately'' (p. 1000). Ferrari, Westrate, and Petro (2013) refer as well to the proverbial "examined life" (p. 144).

Posttraumatic Growth: A Special Redemptive Narrative Sequence

The present research findings indicate that PTG however should not be defined as a simple redemption sequence (a negative event leading to a positive outcome for the self), as is often done in current research on PTG. Distinctions are to be made between perceived growth, perceived benefit, PTG as positive centrality of event, PTG as a simple redemption sequence, behavioral growth and authentic PTG, and between experiential and reflective growth. In the case studies described above, all three participants illustrate impressive and valuable growth in the service of others, or out of "altruism born of suffering" (Staub & Vollhardt, 2008). However only David exhibits veridical PTG or reflective growth when Pals' (2006c) model of growth is applied. Pals (2006c) states that transformational processing (or PTG) "may be best thought of as a special type of redemption sequence" (p. 208).

In his Life Story narrative, David refers to a positive change in his narrative identity and personality post-event. This includes, for instance, enduring changed in terms of his life perspective, his behaviors, ways of relating to others and his expectations of himself. The finding is consistent with Jayawickreme & Blackie (2014) who note that PTG appears to involve the experience, post-adversity, of meaningful changes in the individual's characteristic and enduring patterns of thoughts, feelings and behaviors. The latter aligns with the APA definition of personality. More specifically, Jayawickreme and Blackie (2016) states that PTG may be associated with character

virtues such as wisdom, which involves generative behavior but also reflective knowledge.

Personal Reflection of the Primary Researcher

As is the tradition of qualitative research, reporting on study findings includes taking into account the primary researcher's experience. My lived experience, as relates to the traumatic material presented by the three Veteran study participants during the data analysis stage of the study, was revealing. Through my qualitative study journal writing exercises, I came to realize, as the study primary researcher, that I struggled, albeit at a much smaller scale, as did study participants with the traumatic story contents. What I initially believed to be primarily an "intellectual" scientific inquiry was in fact also a big emotional undertaking for me as primary researcher. I struggled to engage with the interview material until I finally realized that my efforts to cognitively comprehend the veteran peacekeepers' life stories, as a student, were inadequate. I needed to let myself feel along with the study subjects. The stereotype of the objective and detached scientist did not apply here. I found myself procrastinating and engaging in avoidance. The traumatic life stories elicited questions in terms of meaning and a profound sadness as relates to the human condition. More specifically, I came to realize that the Life Story narratives of the three veteran family men, who had battled to do good in life but who found themselves seriously hurt by life, reminded me of another emotionally hurt and, at times, volatile family man: my own father whom I lost to cancer during the course of the study. In order to do a good job with the narratives in front of

me, I found myself needing to also engage in narrative processing parallel to that of the study subjects: I had to 1) emotionally engage in explorative processing as concerns the intersection of the Veteran study participants' life stories with my own life story in order to eventually; 2) achieve positive resolution and meaning making as relates to the traumatic parts of my own history (making posthumous peace with my emotionally volatile father).

To achieve positive resolution, I learned I also had to pay attention to cultural context or to the "times" that fed my father-daughter conflict: I coming of age as an independent, first-generation, Italo-Canadian woman at the tail end of the feminist revolution, and my Italian-immigrant father trying to navigate between his love for his new country and the opportunity it provided while also desperately trying to maintain the ways of his old country, especially as concerns his traditional male role and identity as family patriarch. Issues related to culture and gender were equally influential in the life stories of the three study participants.

A second parallel between the experience of study participants and my own life story occurred when adverse life events occurring during the course of my doctoral study that led to my own narrative disruption. My father's premature death to cancer due to a medical error, a car accident, and subsequent cancer diagnoses in two of my dearest friends, led to discontinuity and disruption in my life trajectory, which manifested as an inability to go on due to physical injury, emotional loss and existential questioning as to

the way forward. Who was I? What was I capable of and no longer capable of and whom did I want to be moving forward? Suddenly, the choice to undertake doctoral studies so late in my life, when I already had an established career as a psychologist and a grown family, no longer made sense to me. Was I not supposed to be enjoying life given its unpredictability rather than sitting in front of the computer for countless additional hours after a full week's work at the office? As a doctoral student now in her fifties, I struggled with societal messages as well, such as "work-life balance" and cultural norms as to what a woman my age, with a grown child and an already retired husband, should be doing with my time: going out to supper, otherwise socializing with my peers, and travelling rather than reading piles of scientific articles on weekends. My sense of belonging and of social connectedness to my social group was negatively impacted. As well, my sense of competence was tested as I struggled to process the traumatic life material the Veteran study participants shared with me while dealing with the trauma in my own life. I no longer felt competent therefore I wanted to walk away, no longer seeing the pertinence to the pursuit of my studies.

My family and friends encouraged me to keep going and their counsel prevailed. I came to realize how important it was to me to honor the veterans who had been so courageous and generous in sharing their stories with me. I stopped avoiding and immersed myself anew in a review of the traumatic interview content and gradually the scientific and personal pieces started to come together. At the personal level, as I engaged emotionally in greater depth with the all-male veteran life stories, I found

myself also connecting anew with this very important man in my private life, my father, who also has a difficult past and who like the peacekeeper veterans I was studying, also took on an important cause. While the former chose to sacrifice for their country by joining the military as young men, my father sacrificed for his family of origin, also during late adolescence, by choosing to leave his country for a new horizon, and subsequently also sponsoring the rest of his family's immigration first to France and then to Canada.

My father largely succeeded in this land of opportunity, first by holding two and three jobs at a time but then finally landing a high paying unionized manufacturing job. The 1980 recession then hit, my father's company closed, and dad, whose identity was largely defined by his employment, experienced his own narrative identity disruption. All future attempts to secure similar employment conditions failed and my father became a changed man. Our relationship, already tested by childhood events, now became even more strained.

The doctoral study allowed me to reflect and engage with my own and my dad's life story. The project allowed me to better understand how chronic unemployment impacted my father's life, disrupting his narrative self and rendering him emotionally volatile (and then myself as well, in a sense). What I previously labeled as "badness" in him (and in myself for resenting him as long as I did), I now understand as narrative identity disruption and "pain". My father had strong values and an intention to do good.

He went to battle for what he believed in, as did the veterans in this study. Interestingly, he also found his way towards post-adversity growth in the form of his own volunteer work with the elderly later in his life; work I helped him find and of which he was terribly proud.

The impetus for growth in my own life, I now realize, has come from my father. He valued and instilled the value of hard work and of higher education in his children. And, although he was not ever able to say it to us, he was tremendously proud of us. I now realize that all that I am today is because of him. This doctoral work is my offering to him for everything he has given me that is so good, his perseverance, his determination and his dedication to good and to growth. I honor the veterans in this study for their similar values and strength. This dedication is also finally an act of forgiveness on my part for all of my dad's and my own imperfections.

Study Limitations and Strengths

There are several limitations to this study. Interpretations of the study findings should be made with this in mind. First, study findings cannot be generalized to the entire population of veterans impacted by trauma given a purposeful selection of a very specific veteran sample (Canadian veteran peacekeepers with PTSD who self-identified as having experienced PTG and who exhibited behavioral PTG in the form of peer helping). A further limitation of the study is also the small sample size (three case studies) and the lack of diversity among participants. The sample consisted of three

Caucasian male veterans and although this demographic remains representative of the current majority of the Canadian veteran peacekeeping population, it is not representative of the increasingly diverse population of Canadian military and veterans.

Despite the limitations, this study also had a number of notable strengths. The present research findings address the current ubiquitous and ill-defined construct of PTG in the scientific literature, empirically illustrating the usefulness of the more circumscribed definition of PTG presented by McAdams and Pals (2004). More specifically, the study findings bring more clarity to the construct of PTG as a narrative identity revision accommodative process, which leads to personality change (ego development) and wisdom as an outcome. As well, the research findings illustrate the usefulness of applying narrative methods to the study of PTG given their ability to demonstrate how the individual re-establishes coherence and meaning post-adversity.

Finally, this research was the first to study PTG in a Canadian veteran peacekeeper population with PTSD. Study findings illustrate the important identity challenges faced by Canadian veterans with PTSD released from the military and how their socio-cultural milieu can either hinder or facilitate their narrative identity re-construction attempts. More specifically, study findings inform policy makers as to the importance of creating a positive cultural narrative as to the soldier's important role and place not only while in uniform but also once out of uniform. Finally, study findings inform clinicians as to the importance of narrative identity reconstruction in the treatment of traumatized veterans.

Future Directions

As a future direction, it would be important for researchers to explore the experience of female and minority veterans with PTG, which may differ significantly from that of the predominantly white, male veteran peacekeepers included in this studied (Gallaway et al., 2011; Vishnevsky et al., 2010). More research is also required to obtain a better understanding of how openness to emotional experience can be promoted in individuals to facilitate PTG as an identity-making narrative process in the advent of adversity. Improved quantitative measures of PTG are also required to measure authentic rather than perceived PTG. More studies are also needed to develop more comprehensive pathway models to PTSD and PTG that address socio-cultural factors and that distinguish between a trajectory that leads to illusory versus authentic PTG. Finally, quantitative studies of PTG in military and veterans populations should include measures of military identity, although, as Lancaster, Kintzle, and Castro (2018) note, more work is required in military identity scale development.

Conclusion

Pals' (2006b) two-step identity processing model of difficult life experiences was applied to differentiate authentic PTG from other forms of growth following adversity, in a population of Canadian veteran peacekeepers with PTSD who dedicated themselves to peer support work following their trauma. Study findings illustrate the utility of adopting Pals and McAdams's (2004) circumscribed definition of the transformational process as an identity-making narrative process, which allows for a clear distinction to be made between perceived, action-based post adversity growth and authentic PTG. In comparison to other types of growth following adversity, this two-step narrative processing leads to ego development, wisdom and positive personality change (Pals, 2006b).

The study findings emphasize, specifically, the role of biographical disruption in military trauma and how differences between veteran participants in terms of openness to their experience, be it at a cognitive or affective level, result in different growth outcomes. Findings from this qualitative study with Canadian veteran peacekeepers illustrate also the role of culture, and military culture, in the maintenance of military PTSD, and the importance of significant others as well government agencies, in either hindering or facilitating narrative identity processing that leads to the development of authentic PTG. Finally, the research findings illustrate the usefulness of applying

narrative methods to the study of PTG given their ability to illustrate how the individual re-establishes coherence and meaning post-adversity.

Clinical Implications

Study findings indicate that authentic PTG refers to personal transformation that occurs as a result of a two-step narrative process in which the individual: 1) actively acknowledges the negative impact of traumatic experiences on the self and affectively and cognitively works through this negative impact rather than distancing one's self from one's emotional experience or remaining submerged by negative affectivity; and 2) achieves positive resolution through the narrative construction of a positive and coherent ending to the traumatic story by experiencing the self as positively transformed. Psychotherapy can be very helpful in assisting trauma victims to work through these two steps. In the present study, David, who exhibited reflective growth, or authentic PTG, directly associated his PTG recovery to his psychotherapy endeavor.

Tedeschi, Calhoun and Groleau (2015) encourage the clinician's application of existing evidence-based trauma treatments with traumatized individuals while she or he also remains open to the possibility of PTG. First steps involve helping the traumatized person address their high level of emotional distress and offering the individual the support and tools that will help them manage this distress, eventually leading to the latter's ability to engage in deliberate cognitive processing and narrative reconstruction as relates to the negative impact of the traumatic event on the self. The role of clinicians

therefore is to be "*facilitators* rather than creators of growth, and *companions* who offer some expertise in nurturing naturally occurring processes of healing and growth." (Tedeschi, Calhoun et al., 2015, p. 510). Tedeschi, Calhoun et al. (2015) advise, in other words, that the therapist accompany the client from where he or she stands at any particular moment, adopting the framework of the trauma survivor, listening rather than trying to solve, tolerating and respecting the use of benign cognitive biases when present, highlighting subtle shifts in affect and perspective when these occur, and listening and labeling PTG as it begins to emerge. In contrast, Tedeschi, Groleau et al. (2015) warn that:

> posttraumatic growth is likely to be inhibited by heavy-handed attempts to move trauma survivors toward understandings they have not yet directly experienced (Calhoun & Tedeschi, 1999, 2013). The changes that life crises produce are experiential, not merely intellectual, and that is what can make them so powerful. This is the same for post-traumatic growth—there is a compelling affective or experiential flavor to it that is important for the clinician to honor. Therefore, we see the clinician's role as often subtle in this facilitation. The clinician must be well attuned to the client when the client may be in the process of reconstructing schemas, thinking dialectically, recognizing paradox, and generating a revised life narrative. (p. 509)

This approach is consistent with present study findings, which illustrate that much work needs to be done to accompany and manage symptoms of hyperarousal or re-experiencing and avoidance associated with PTSD in veterans before the combined cognitive and affective work on PTG specifically can begin. The statement above also puts into question the preventive initiatives such as the CSF, the multi-million public health initiative established by the U.S. Army to promote pre-deployment psychological health and wellness in its soldiers throughout their career and which also includes a psycho-educational module specific to PTG. The CSF involves evaluating the

psychological and behavioral health of soldiers through online self-administered questionnaires and prescribing online modules to "redress specific deficits discovered during the self-evaluation and to train soldiers to enhance their resilience and wellness behaviors." (Smith, 2013, p. 242). Smith (2013) argues that although the objective of the CSF to improve psychological strength and prevent combat-related mental disorders in service members is well-intentioned, these types of preventive psychological interventions may in fact be damaging to military members. The author contends that the CSF promotion of positive emotions can make service members experiencing intense negative feelings post-deployment feel marginalized and demoralized for failing to successfully apply CSF coping strategies and/or, may make them feel that their emotional experience is being trivialized. According to Smith (2013), the CSF emphasis on minimizing negative emotions may also impair post-deployment adaptation for those who have killed or otherwise engaged in violent acts and who may need to feel emotions such as guilt and shame in order to help them "contextualize morally challenging combat experiences and reconnect with others" (p. 244). Finally, Smith (2013) argues that the CSF emphasis on positive affect places responsibility for wellness on the individual service member, leading to self-blame, while minimizing factors related to U.S. military policy.

The present study indicates that veterans need to be encouraged to be open in regards to expression of difficult emotions and to author their own narrative as concerns the self. As such, narrative and constructivist therapies may be beneficial in helping

veterans grow post-trauma. As Neimeyer (2004) writes: “self-narratives are the very substance that are disrupted by trauma and loss, […] public and private narration of tragedy and transition is heavily implicated in posttraumatic repair and transcendence.” (p. 58). Narrative-based psychotherapies, such as Metacognitive Interpersonal Therapy, can be applied to help positively re-author one’s life post-adversity (Dimaggio et. al, 2017). Metacognition is closely related to Fonagy’s construct of mentalization (Fonagy, Gergely, Jurist, & Target, 2002), refers to one’s awareness of mental states, and is concerned with “how people form ideas about social exchanges” and “the variations in the complexity, adaptiveness and flexibility of one’s mental representations” (Lysaker, et al., 2015, p. 3). Deficits in metacognitive capacity have recently been linked to subjective distress and heightened levels of hyperarousal symptoms in adults with PTSD (Lysaker, et al., 2015). Dimaggio et al. (2017) recently illustrated, using a case study format, how metacognitive interpersonal therapy was successfully applied to reduce PTSD symptoms and to promote a healthier self-narrative in a woman in her 40s who had been diagnosed with HIV at the age of 21. Expressive writing may then also be utilized as a technique to assist with narrative reconstruction and to foster PTG (Lancaster, Klein, & Heifner, 2015; Slavin-Spenny et al., 2011; Smyth, Hockemeyer, & Tulloch, 2008). Finally, Hijazi et al. (2015) refer to the role of cognitive flexibility in facilitating PTG and recommend interventions that can reinforce skills such as flexible problem solving, increased insight into metacognition, and “increasing the ability to sit with paradox” (p. 403).

Acceptance-Commitment Therapy (ACT) may also be beneficial in increasing PTG. Components of ACT such as: seeing the self-as-context, nonjudgmental awareness of experiences as they occur in the moment, and defusion (decreased attachment to experiences) can decrease centrality of event with negative valence (Boals, Murrell, Berntsen, Southard-Dobbs, & Agtarap, 2015) and may lead to PTG as an ultimate outcome (Boals & Murrell, 2016). As well, the emphasis on establishing value-based goals in ACT can assist individuals in creating a renewed narrative identity post-adversity.

Given the reality of life's direct or indirect confrontation with death, and especially in the case of traumatic events, the argument has also been made that increased attention to addressing death anxiety is required in psychotherapy (Major, Whelton, & Duff, 2016). As Vance (2014) writes: "To deny death in the clinical room may, in fact, deny the patient their creative drive to construct life" (p. 428). Jayawickreme and Blackie (2016) argue that events that result in an increased awareness of one's mortality may lead to growth.

In military and veteran populations, psychotherapeutic interventions that complement or expand on the most disseminated evidence-based, first line treatments for PTSD for military and veteran populations (cognitive processing therapy and prolonged exposure) may be needed, especially given modest treatment outcomes reported with this population (Steenkamp, Litz, Hoge, & Marmar, 2015). Forbes et al.

(2019) call for the development of more comprehensive evidence-based guidelines that address treatment sequencing and different symptom clusters. Addressing narrative identity disruption should be included in this treatment sequencing as well as interventions that make a more fullsome distinction between trauma and personal transgressions, and between experiences of fear versus terror (moral injuries; Litz et al., 2009).

Babins-Wagner (2019) emphasizes that: “Treatment needs to be tailored to the many aspects of client, including problem, complaint or disorder and also include attitudes, values, history, culture, resources and context (Wampold, 2001, 2007)” (p. 24). Attention to military-specific factors contributing to the veteran’s posttraumatic reality is therefore also required. Military cultural competency training may therefore be needed for clinicians unfamiliar with the military and veteran context. Finally, Lambert et al. (2003) have demonstrated how routine treatment outcoming monitoring can be effective reducing treatment failures and improving outcomes.

Other than psychotherapy, the present study findings indicate that programs that offer veterans the opportunity to continue to be involved in meaningful work and to be engaged with their peers in an alternative capacity, such as peer support can also promote growth, and possibly PTG. At the same time, necessary safeguards and accompaniment needs to be in place to mitigate risks surrounding the emotional labor (Mancini & Lawson, 2009) involved in peer support work.

Finally, military and veteran organization policy makers are encouraged to consider preventive interventions, administered both early in the military member's career and closer to release, to facilitate successful narrative adaptation to civilian life. This includes the creation of "transition rites" (Demers, 2011, p. 176), not only upon entry into the military but to assist with discharge and adaptation to civilian life as well. This asssitance and release from the military should not be an administrative process alone. The challenge is to promote and adopt a more cohesive military cultural narrative, throughout and *beyond* the military member's service. This narrative should convey positive messages of autonomy (meaning), competence and belongingness in regards to military service but also as surrounds the ex-soldier's continued important contribution, personal relevance and belongingness well beyond service, given significant skills and capabilities acquired as a result of military membership. This involves developing organizational policies that aim to: 1) minimize the potentially adverse impact on the soldier's narrative identity when one becomes 'unfit' for deployment (choice of language to be revisted); 2) that provides a prompt and compassionate administrative recognition of the soldier's service-related injury; and a positive way forward. As Demers (2011) states: "Opportunities to develop integrated personal narratives could provide a way to prevent or at least mitigate poor mental health outcomes." (p. 176).

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Appendix A

Invitation to Participate in Study

Dear Peer Support Worker,

The purpose of the following email is to invite you to participate in a research study that I am conducting as part of my Doctoral thesis studies at Université de Sherbrooke located in Quebec, Canada. The subject of my study is **posttraumatic growth**.

Although it is well-known that individuals can experience distress and injury following exposure to a traumatic event, **posttraumatic growth** can also occur and is defined as a positive transformation in the self, in interpersonal relationships, and in life philosophy as a result of the cognitive struggle associated with highly challenging life circumstances, either shortly after the event or over time.

As part of my study, *which is completely independent of my functions at Veterans Affairs Canada*, I would like to interview a total of three peer support workers who meet the following study criteria:

- Previously deployed
- English-speaking
- Male
- Released from the Canadian Armed Forces
- In receipt of a favourable decision from Veterans Affairs Canada for a pension or disability award for PTSD
- Presently working as a peer helper within a peer support program; and
- Self-identifying as having experienced posttraumatic growth (as defined above).

In attachment, you will find: 1) a research participation consent form that provides a description of my study and information as to the ethics approval I have obtained both from Université de Sherbrooke and the Department of National Defense (#1386/14F); and 2) a socio-demographic questionnaire.

Your involvement in the study, should you accept to take part, will consist of completing the two documents described above (this can take place during our face-to-face meeting) and participating in a confidential 90-minute audiotaped interview in which I will ask you to tell me your life story (life chapters, high points, low points and turning points in each life chapter).

The objective of this qualitative research, consisting of three case studies, is to gain a better understanding of the posttraumatic growth process. Scientific knowledge obtained may inform clinicians on how to facilitate posttraumatic growth in Veterans and others who have been exposed to trauma.

Please note that your participation in this study is confidential. No identifying information provided by you as a result of your participation in this study will be shared with either the Department of National Defence or Veterans Affairs Canada.

Should you wish to obtain more information on the study please do not hesitate to either contact me directly at: 514-457 3440, Ext. 2285, or my Doctoral thesis supervisor, Dr. Rachel Thibeault from the University of Ottawa at: (613) 562-5800, Ext. 8034.

I look forward to hearing from you.

Sincerely,

Pasqualina (Lina) Carrese, M.Ps
Doctoral Student
Psychology Department
Université de Sherbrooke

Appendix B

Research Information and Consent Form

UNIVERSITÉ DE SHERBROOKE

RESEARCH INFORMATION AND CONSENT FORM

You are invited to participate in a research project. This document describes the project's procedures. Feel free to ask questions about any words or paragraphs you do not understand. To take part in the project, you must sign the consent section at the end of this document; a signed and dated copy will be returned to you.

Project Title

The Process of Posttraumatic Growth in Canadian Veteran Peacekeepers Diagnosed with Post-Traumatic Stress Disorder who have Become Peer Helpers: A Narrative Study.

Principal Investigator

Pasqualina (Lina) Carrese is a psychologist and a Doctoral student who will act as principal investigator for this project. Rachel Thibeault, professor at the Faculty of Health Sciences at the University of Ottawa is the thesis supervisor and Mélanie Couture, researcher at Centre de recherche et d'expertise en gérontologie sociale du CSSS Cavendish, is the thesis co-supervisor. For more information, you may contact Rachel Thibeault by phone at (613) 562-5800 extension 8034.

Research Project Funding

No funding

Purpose of the Research Project

The objective of this project is to study the posttraumatic growth process in three Canadian Veterans diagnosed with posttraumatic stress disorder engaged as peer helpers and who self-identify as having experienced posttraumatic growth. Findings from this qualitative research project that adopts a case study format can lead to a better understanding of posttraumatic growth in individuals following exposure to a traumatic event.

Study Procedure

As a Canadian Veteran diagnosed with posttraumatic stress disorder, presently engaged in peer support work and self-identifying as having personally experienced posttraumatic growth, you are invited to take part in this research study. Your participation in this project will involve completing a socio-demographic questionnaire in which you will be asked to note the following: your age, marital status, ethnic background, mother tongue, number of children, number of years of employment as a peer support worker, number and location of your deployments, date and reason for your release from the Canadian Armed Forces, date and type of treatments received for your PTSD. An interview of approximately 90 minutes will follow in which you will be asked to relate your life story (different life chapters, high points, low points, turning points within each life chapter). This interview will be held in person based on your availability and will be audiotaped.

Potential Benefits

By participating in this project, you will contribute to the advancement of knowledge in the field of posttraumatic growth and you will learn about your own posttraumatic growth process. More specifically, this study will result in a better understanding of the role of narratives in personal transformation.

Potential Risks and Inconveniences

Your participation should not involve any significant inconveniences, other than offering some of your time. You may ask to take a break or to continue the interview at a more convenient time should you become fatigued or distressed.

It is possible that you may find certain moments during the interview process difficult. Should you need to take a break or need to speak about your difficulty during the interview, you can do so. You can also decide to not answer or address a particular question or point if you find it too difficult. Should you need some assistance following the interview, you can contact the confidential Veterans Affairs Canada Assistance (VAC) Line managed by Health Canada at 1-800-268-7708; you can also contact VAC at 1-866-522-2022, from Monday to Friday 8:30 a.m. to 4:30 p.m., to request the assistance of a VAC case manager and/or a referral to either an Operational Stress Injury Clinic or to a community service provider as per your need.

Voluntary Participation and Withdrawal from the Study

It is understood that your participation in this research project is completely voluntary and that you remain free, at any moment, to end your participation without having to justify your decision and without penalty.

If you withdraw from the study, do you ask that the audio/video or written documents pertaining to you be destroyed?

YES NO

Financial Compensation

Your participation in this study will not incur any cost for you. It is agreed that no financial compensation will be given to you for participating in this project.

Confidentiality, Sharing, Supervision, and Publications

While you take part in this research project, the study investigator will collect and record information about you in a research file. Only information needed for research purposes will be collected. All the information collected about you during the study will remain confidential within the legal limit. To protect your privacy, your information will be identified with a code number. The link between your identity and that code number will be kept secure by the study investigator.

The study investigator will use the data for research purposes only, in order to fulfill the scientific objectives of the study as described in this information and consent form. The data may be published in scientific/medical journals or shared with other persons during scientific meetings. No data published or shared will reveal any information that could lead to your identification.

To make sure the data collected based on the information you provide is accurate, your research file may be inspected by a person or persons authorized by the Research Ethics Board of the Department of Lettres et sciences humaines de l'Université de Sherbrooke or public authority representatives. All of these persons and groups are bound by confidentiality policies.

Results of the research and publications

You will be informed of the research study results and of publications that may ensue as a result of the study, as necessary. We will preserve the anonymity of the study participants.

Further studies

The results from this study may be used for another research project. In this eventuality, do you authorize the research team to contact you to ask if you would be interested in taking part in this new research?

YES NO

Surveillance of ethical aspects related to the study

The Research Ethics Board (REB) – Lettres et sciences humaines of Université de Sherbrooke has approved this research project and is responsible for its follow-up. Furthermore, any modification to the study protocol or to this research information and consent form will be submitted to the REB for approval.

Finally, this research project has also been approved by the Director General, Military Personnel Research and Analysis (DGMPRA) Social Science Research Review Board, in accordance with CANFORGEN 198/08. The SSRRB approval # is 1386/14F.

You may discuss any ethical issues related to the conditions of your participation in this project with the person in charge of the project, or address your concerns to Mr. Olivier Laverdière, Chair of the Research Ethics Board – Lettres et sciences humaines, Université de Sherbrooke, by contacting the committee coordinator by telephone at 821-8000 extension 62644, or by email at cer_lsh@USherbrooke.ca. You can also contact Dr. Kelly Farley, Chief Scientist, Director General, DND Military Personnel Research and Analysis, at (613) 996-1280 or at Kelly.farley@forces.gc.ca.

Voluntary and Informed Consent

I, _____ (please print), have read and/or understand this consent form, of which I have received a copy. I understand the reason and the nature of my participation in this project. I received explanations about the study, and my questions were answered to my satisfaction.

I freely agree to participate in this research study.

Signature of the participant: _____

Signed in _____, on _____ 2014

Researcher Declaration of Responsibility

I, Pasqualina Carrese, principal investigator, declare that I am responsible for carrying out this project. I commit to respect the obligations stated in this document and to inform you of any element that may modify the nature of your consent.

Signature of the principal investigator: _____

Declaration of the Person Responsible for Obtaining Consent

I, Pasqualina Carrese, declare that I have explained the terms of this form to the study participant. I have answered the participant's questions on the subject, and have clearly indicated that he or she is free to withdraw at any time from participation in the project described above. I commit to ensure the respect of the study objectives and to respect confidentiality.

Signature: _____

Signed in _____, on _____ 2014

Appendix C

Socio-demographic Questionnaire

Socio-demographic Information

Identification number: SSRRB 1386/14F

Age _____ Marital Status_____ Number of children ___ Mother tongue_____

Number of years of schooling _____ Ethnic background _____

Number of years employed as a peer support worker _____

Military Information

Number of years of service _____ Military rank _____ Number of missions _____

Location and dates of deployments

_____

_____

_____

Date of release _____/_____/_____ Reason for release_____

Day Month Year

Medical and psychiatric diagnoses at time of release

_____

Treatment Services Received Post-deployment

Type:	Dates: *Month/Year*	Duration:
Psychotherapy	_____	_____
Outpatient Psychiatric Services	_____	_____
Inpatient Residential Services	_____	_____
Psychiatric Hospitalization	_____	_____

Thank you

Appendix D

Life Story Interview

Modified Version of McAdams (2008) Life Story Interview[1]

Introduction

This is an interview about the *story of your life*. As a social scientist, I am interested in hearing your story, including parts of the past as you remember them and the future as you imagine it. The story is selective; it does not include everything that has ever happened to you. Instead, I will ask you to focus on a few key things in your life – a few key scenes, characters, and ideas. There are no right or wrong answers to my questions. Instead, your task is simply to tell me about some of the most important things that have happened in your life and how you imagine your life developing in the future. I will guide you through the interview so that we finish it all in about 90 minutes.

Please know that my purpose in doing this interview is not to figure out what is wrong with you or to do some kind of deep clinical analysis! Nor should you think of this interview as a "therapy session" of some kind. The interview is for research purposes only, and its main goal is simply to hear your story. As social scientists, my colleagues and I collect people's life stories in order to understand the different ways in which people in our society and in others live their lives and the different ways in which they understand who they are. Everything you say is voluntary, anonymous, and confidential. I think you will enjoy the interview. Do you have any questions?

---

[1] Section A & B from McAdams (2008) retrieved on January 1, 2014 from: https://www.sesp.northwestern.edu/foley/instruments/interview/; Section C added as per Pals' (2006c) methodology.

A. Life Chapters

Please begin by thinking about your life as if it were a book or novel. Imagine that the book has a table of contents containing the titles of the main chapters in the story. To begin here, please describe very briefly what the main chapters in the book might be. Please give each chapter a title, tell me just a little bit about what each chapter is about, and say a word or two about how we get from one chapter to the next. As a storyteller here, what you want to do is to give me an overall plot summary of your story, going chapter by chapter. You may have as many chapters as you want, but I would suggest having between about 2 and 7 of them. We will want to spend no more than about 20 minutes on this first section of the interview, so please keep your descriptions of the chapters relatively brief.

[*Note to interviewer: The interviewer should feel free to ask questions of clarification and elaboration throughout the interview, but especially in this first part. This first section of the interview should run between 15 and 30 minutes*.]

B. Key Scenes in the Life Story

Now that you have described the overall plot outline for your life, I would like you to focus in on a few key scenes that stand out in the story. A key scene would be an event or specific incident that took place at a particular time and place. Consider a key scene to be a moment in your life story that stands out for a particular reason – perhaps because it was especially good or bad, particularly vivid, important, or memorable. For each of the

eight key events we will consider, I ask that you describe in detail what happened, when and where it happened, who was involved, and what you were thinking and feeling in the event. In addition, I ask that you tell me why you think this particular scene is *important* or significant in your life. What does the scene say about you as a person? Please be specific.

1. High point. Please describe a scene, episode, or moment in your life that stands out as an especially positive experience. This might be *the* high point scene of your entire life, or else an especially happy, joyous, exciting, or wonderful moment in the story. Please describe this high point scene in detail. What happened, when and where, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so good and what the scene may say about who you as a person or about your life.

2. Low point. The second scene is the opposite of the first. Thinking back over your entire life, please identify a scene that stands out as a low point, if not *the* low point in your life story. Even though this event is unpleasant, I would appreciate your providing as much detail as you can about it. What happened in the event, where and when, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so bad and what the scene may say about you or your life. [*Interviewer note: If the participants balks at doing this, tell him or her that the event does not really have to be* ***the*** *lowest point in the story but merely a very bad experience of some kind.*]

3. Turning point. In looking back over your life, it may be possible to identify certain key moments that stand out as turning points -- episodes that marked an important change in you or your life story. Please identify a particular episode in your life story that you now see as a turning point in your life. If you cannot identify a key turning point that stands out clearly, please describe some event in your life wherein you went through an important change of some kind. Again, for this event please describe what happened, where and when, who was involved, and what you were thinking and feeling.

C. Significant Persons in Your Life.

Finally, can you identify and describe the two or three people that have had the most significant influence on your life?